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HARTFORD TIMES

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BOSTON HERALD-TRAVELER

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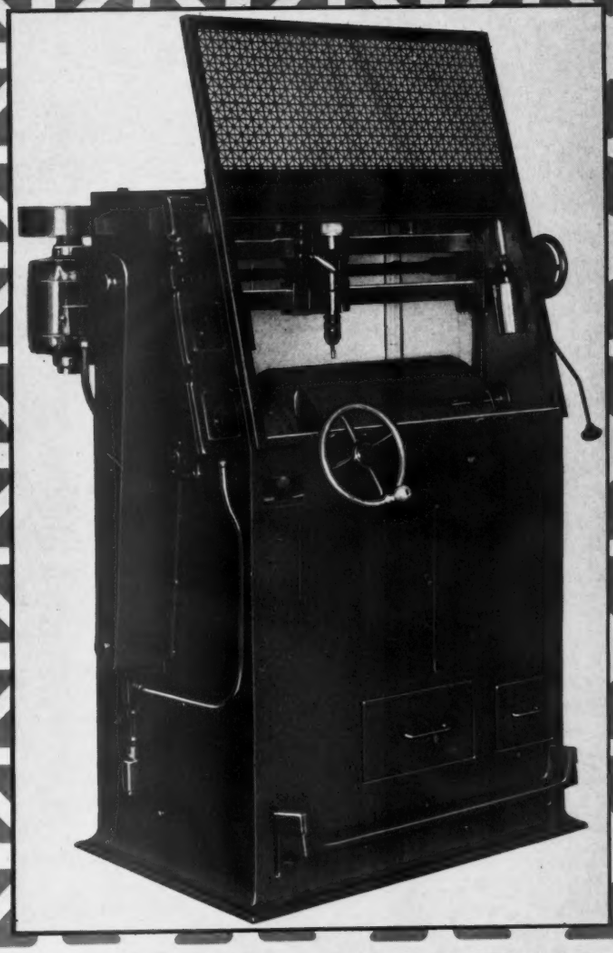

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LOS ANGELES, CALIF.

Plans Maturing for A. N. P. A.

Mechanical Conference at Chicago's Drake-Knickerbocker Hotels, June 10, 11 and 12 — Equipment display space increased.

THE Fourteenth Annual American Newspaper Publishers Association Mechanical Conference will be held at the Drake Hotel, Chicago, June 10, 11 and 12. While the Drake will be headquarters hotel, some of the conference sessions will be held in the Knickerbocker Hotel which is directly across the street from the Drake. The equipment and supplies exhibits and the Mechanical Department's newspaper exhibit will also be held at the Drake.

According to present plans, which may be changed if developments render it necessary, sessions will be held on the morning and afternoon of each of the three days. Monday afternoon has been set aside for four departmental or group meetings, covering problems of the engraving department, composing room, stereotype room, and pressroom. Reports of these departmental meetings will be presented to a general session on Tuesday or Wednesday.

A half-day session will be devoted to the problems of newspapers of 50,000 circulation and under. Offset, rotogravure, and color printing have been assigned one session.

At least one session will be devoted to subjects of general interest.

Among the speakers who have accepted invitations to appear on the program are S. E. Thomason, Publisher, Chicago *Daily Times*, E. E. Fies, Assistant Electrician, Chicago *Tribune;* Ben Dalgin, Director of Art and Reproduction, New York *Times;* Ralph H. Braden, Department of Chemistry, Rochester Athenaeum & Mechanics Institute; Jack Kelt, Mallinckrodt Chemical Works; C. W. Dickinson, Manager, Offset Press Division, R. Hoe & Company.

Exhibit Space Increased

More space for exhibits is available than was the case when the Conference met at the Drake in 1937. Seventy-one booths have been laid out in the Gold Coast Room and French Room. Twenty or twenty-five additional booths can be accommodated in the Tower Room, if needed. All this space is adjacent to and on the same floor as the Ballroom, in which most of the sessions will be held. Exhibit hours will be from 9 a.m. to 10 p.m. on Monday and Tuesday, and from 9 a.m. to 6 p.m. on Wednesday. Firms wishing to exhibit machinery or supplies must make their arrangements for booth space directly with the Drake Hotel management.

Trade Representatives

The Mechanical Committee has revised the regulations concerning the admission of trade representatives to the sessions. In the past, each company has been allowed to have only one representative attend the sessions. This limitation has been removed for the 1940 Meeting. Every trade representative who wishes to attend the sessions must present credentials at the registration desk. Companies wishing to be represented are therefore requested to write to W. E. Wines, Manager, A.N.P.A. Mechanical Department, 370 Lexington Ave., New York, N. Y., for a card of admission. This request should specify the name or names of the company's representatives. Upon receipt of this request, the Mechanical Department will issue a card of admission for each name. This procedure will greatly facilitate the routine of registration. As in the past, trade representatives will not be permitted to take part in the discussions except upon invitation of the Chairman of the session.

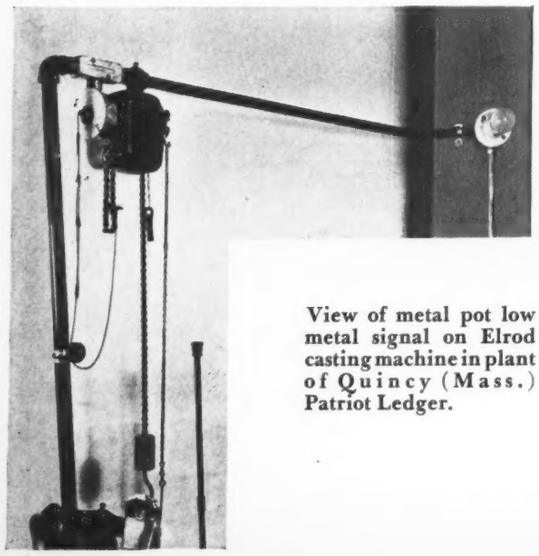
The Mechanical Committee requests that companies having entertainment rooms in the hotel keep these rooms closed while the Conference sessions are being held and that the rooms be closed at a reasonable hour in the evening.

Flasher Light Warns Machinist Metal Needs Replenishing

By LOUIS E. GLAZER*

**Mechanical Superintendent, Quincy (Mass.) Patriot Ledger.*

THE device described here is used in the *Patriot Ledger* plant to warn the composing machinist that the metal on the feeder used on an Elrod casting machine needs replenishing, especially in case the machinist is not in constant attendance. The device can be adapted for any casting machine and practically all types of metal feeders.



View of metal pot low metal signal on Elrod casting machine in plant of Quincy (Mass.) Patriot Ledger.

Operation of the device is simple. As the pig is lowered into the metal pot, the chain slack is taken up. At the point where the pig has been nearly fed into the pot, the chain pulls the switch, which in turn causes the signal lamp to be illuminated. In the lamp outlet is placed a flasher button to aid in attracting the machinist's attention to the need for supplying another pig of metal.

Parts used in making this electric metal signaling device are as follows: 1 Type T conduit fitting, 1 close nipple, 1¾ in. junction box, 1 levolier switch and a ¾ in. junction box cover with a hole in the center to engage switch. In assembling the signal device parts, we used 12 ft. No. 14 rubber covered wire, 1 pi stacker star pulley, 30 in. of levolier chain, 1 spring, 4 connecting links for the chain and 1 cotter pin.

ENLIST

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in the Women's Field Army of the American Society for the Control of Cancer, and help in the intensive war against this disease.

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yourself and others to recognize early symptoms that may indicate cancer.

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some of the 150,000 who may die this year unless promptly treated. Early cancer can be cured.

join your local unit now!

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Long Lines LUDLOW-SET with a single justification

The illustration shows the matrices in the long stick and the typeslug cast therewith. Note how the overhanging character fits into the recessed portion of the adjoining slug, providing for even word spacing throughout.

The Ludlow method of setting long lines not only cuts composing room costs but it improves the quality of composition as well. Lines up to 112½-picas can be set with a single justification, and cast in slug sections.

And so quickly and economically! No guesswork—yet the spacing is uniform throughout. Simply set the matrices in the long stick and space the entire line as usual. Then insert division quads at the marks on the stick which indicate slug lengths. No other justification is necessary.

When the line is cast, it is delivered in slug sections. If a character happens to come where it overhangs the end of a slug, it fits into an indent or recess automatically cast on the next slug. Word spacing can thus be kept uniform irrespective of slug length.

This important feature of setting long lines with but a single justification is only one of the many basic advantages resulting from operation with Ludlow equipment, and is typical of the way in which Ludlow enables you to save time and increase composing-room efficiency. Literature telling the complete story of operating economy with the Ludlow, together with showings of the latest Ludlow typefaces will be gladly sent you upon request.

Set in members of the Ludlow Radiant family

LUDLOW TYPOGRAPH CO.

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NO MORE MISREGISTER!

New! Automatic

BY AUTOMATIC check and adjustment at each gravure color unit, this new photoelectric system assures continuous register. The system immediately detects misregister of any color and automatically applies correction.

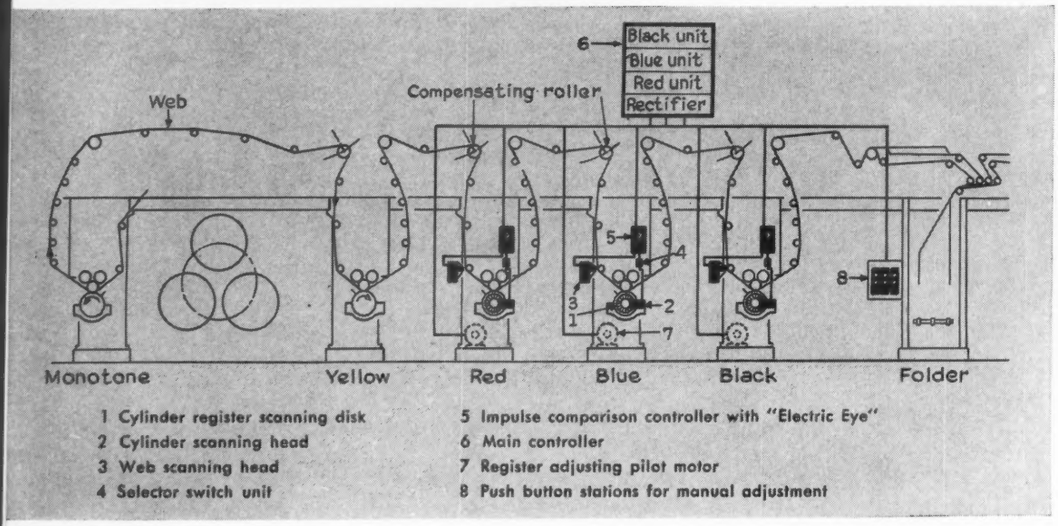
Co-operating with the *Philadelphia Inquirer*, in its progressive plans, General Electric developed this ingenious equipment that assures better printing and less waste.

After initial register has been adjusted on all color units, the operator has only to switch the control to AUTOMATIC, and from then on the photoelectric system will maintain continuous check of register. Photoelectric scanning and comparison devices at each color unit keep a continuous check at running speed. If the web, at any point, is out of register, correction is made instantly through pilot-motor-operated compensating devices. Every single printed impression is automatically checked by the electric eye.

No waste of hundreds of feet of spoiled printing slipping through unnoticed. No unsightly "nightmare" reproduction because of misregister. With automatic gravure register, instead of intermittent inspection and risk of loss, you have continuous observation, and assurance of uniform registered printing.

Again General Electric research and engineering have contributed to advancement in the Graphic Arts. Wide experience in extending the usefulness of electricity equips General Electric to meet the electrical requirements of the printing industry. Automatic gravure register is but one of a number of electrical improvements made to promote progress in printing.

For information on G-E automatic register control, get in touch with the nearest G-E office, or write General Electric, Schenectady, New York.



1 Cylinder register scanning disk
2 Cylinder scanning head
3 Web scanning head
4 Selector switch unit
5 Impulse comparison controller with "Electric Eye"
6 Main controller
7 Register adjusting pilot motor
8 Push button stations for manual adjustment

Scheme of G-E automatic register control on a gravure press

GENERAL ELECTRIC

658-1

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

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APRIL, 1940

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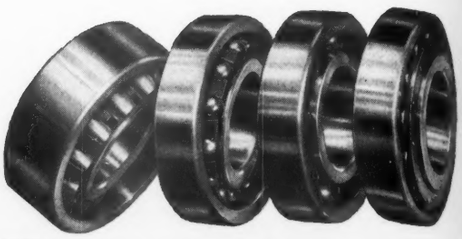
Member Controlled CCA Circulation Audit

IT'S "ALIVE"



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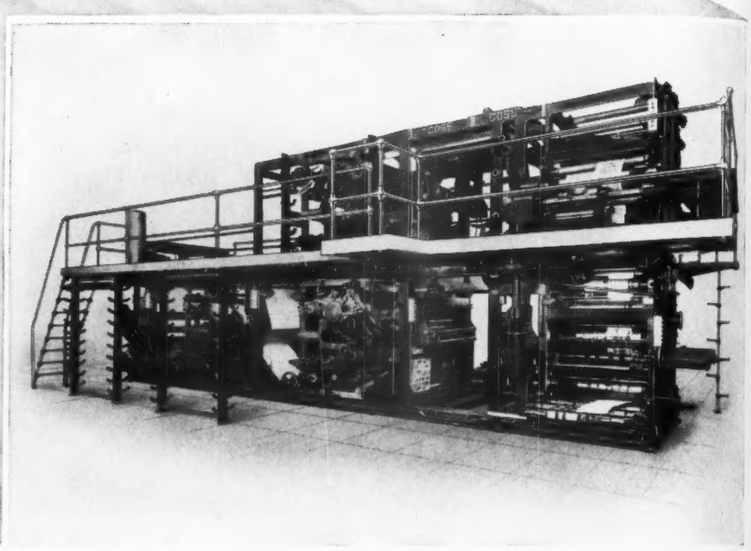
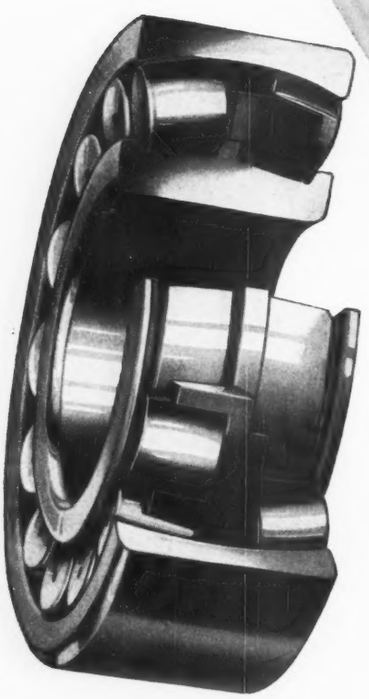
SKF
Puts the Right Bearing in the Right Place



BUILT BY THE GOSS PRINTING PRESS CO.



Here's a press that's "alive" with SKF Bearings. And when we say "alive" we mean not only the large number of SKF Bearings on impression and plate cylinders and drive mechanism, but the dependability they assure at speeds up to 15,000 cylinder revolutions per hour.

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SKF engineers familiar with printing press design are at *your* service, too. Arrange to have them analyze your bearing problems today. 4557

SKF
Ball and Roller Bearings

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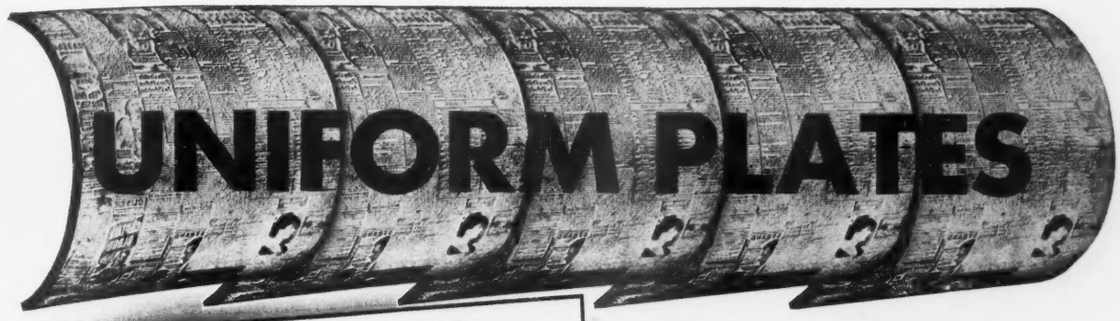
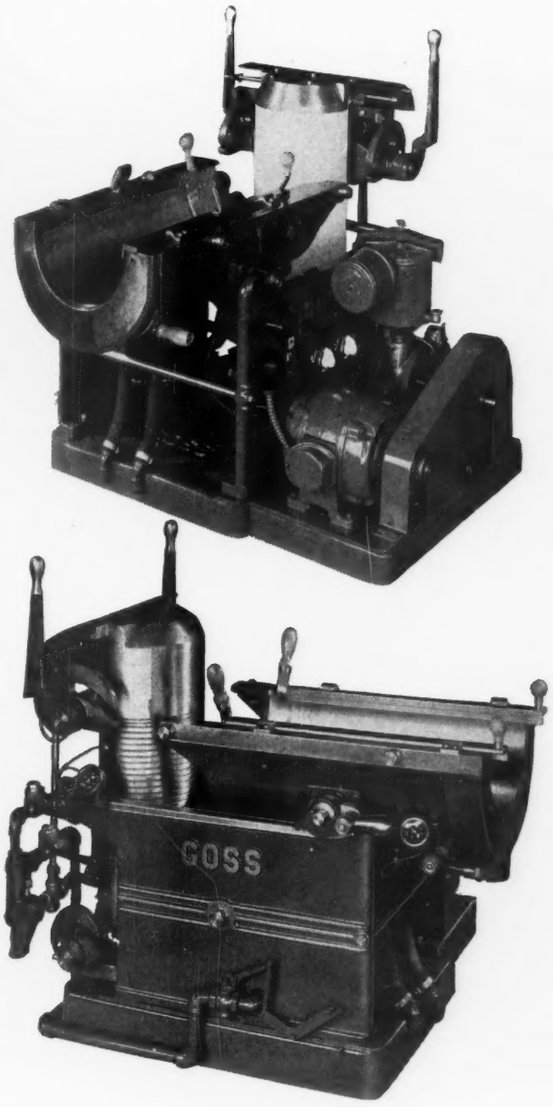


5 BUY GOSS CURVED VACUUM CASTING BOXES

O GLOBO, Rio de Janeiro, Brazil
VAN BOLT-KREBER ELECTROTYPE CO., Columbus, Ohio
NATIONAL ROTARY PRINTERS, Akron, Ohio
STAR-JOURNAL, Minneapolis, Minnesota
TRIBUNE, Chicago, Illinois

Absolute Control of Casting Conditions with a GOSS 44-G

CURVED VACUUM CASTING BOX



Designed for easy operation and full accessibility, the Goss Curved Vacuum Casting Box enables the operator to regulate casting conditions for constant uniformity of plates.

The machine at left, above, is the latest thin plate model, equipped with water cooling chambers and electric heating units in both members for absolute temperature control. Through the use of this system, plates can always be cast under ideal conditions. The vertical core is equipped with a cap and reel arrangement for holding the backing paper which can be quickly attached and need not be trimmed to exact size. The same piece of backing paper may be used for many casts. Dial type thermometers provide a visual check on casting conditions at all times.

The machine at left, below, is equipped with a ribbed plunger and special thermostatically controlled water circulating system. Separate hand controls are provided for cooling either casting member independently. A pre-heating chamber tempers the cold tap water.

The vacuum chambers of both these casting boxes are built for easy access. By removing a top and bottom plate, the full vacuum system is completely exposed for cleaning, in the event of accidental spills. Vacuum is applied to the mat by a convenient foot lever. Casting members are made of special nickel alloy, particularly resistant to warping and corrosion.

Write now for further details and prices!

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SAN FRANCISCO: 707 CALL BUILDING
LONDON, ENGLAND: GOSS PRINTING PRESS CO., Ltd.

GOSS

Announcement

SELDOM used, obsolete equipment is a prime source of unproductive expense in needless taxes, rent and lost efficiency. The scrapping of much or all of it would be a boon both to the industry and to the individual firm.

Printing machinery manufacturers have contributed their share toward this end when replacing obsolete equipment with new machinery. However, to remove and scrap such outdated, unused equipment *without immediately replacing it* might be equally desirable in many cases.

Therefore, to any reputable concern who, by previous arrangement with us, shall scrap any cylinder press, we are prepared to issue a credit certificate good for five years and in an amount *four times that of the machine's scrap value*, the printer to retain the actual money received as scrap. No immediate new Miller purchase need be made, and even if a credit certificate never be used, the holder will have lost nothing as he will have received in cash the actual scrap value of the machine discarded.

We hope by this means to assist our customers and those who contemplate the eventual purchase of Miller Equipment to rid themselves and the industry of machinery once an asset, now a liability.

Full particulars will gladly be supplied upon request or may be obtained, in many instances, by a simple telephone call to your local Master Printers' Association.

MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

First Again!

A grand package for a perfect product

Here, at last, is an ink package your pressmen will open safely and easily without waste or mess . . . opens with a simple twist of the wrist . . . saves ink because it reseals with a quick snap . . . another money-saving reason for using Flint Inks.

Howard Flint Ink Company

DETROIT · CHICAGO · INDIANAPOLIS · DENVER · HOUSTON · NEW ORLEANS

SQUINTING EYES are costing you TWO EXTRA PAYDAYS EVERY YEAR

What's the difference between a SQUINT and a GLANCE? One answer is FOUR PER CENT of the cost of running your line composing machines — operators' pay included! And this 4%, established by careful studies of composing-room records, amounts to *two extra weeks* in every year!

You get the *squint* when using ordinary untreated matrices, when operators must bend forward to read lines in the assembling elevator. A *glance* does the work with Matrix Contrast on the job! Lines are sharp, clear, instantly *readable* in black-and-white. Errors are caught before the line is cast.

A 25% reduction of errors in machine composition is *guaranteed* with Matrix Contrast service. You save machine time; you save the time of operators, proofreaders, and floor men; and you take an important step forward in employee relations, by reducing eye-fatigue among your operators.

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Black & White
MATRIX CONTRAST SERVICE

GUTENBERG EXAMINING FIRST PROOFS FROM HIS PRESS

(From an engraving by Ernest Hinemacher)

It is generally agreed that certain Letters of Indulgence are the first documents bearing a printed date, and these were printed from type cast in a mold and issued in 1454 and 1455 from a press at Mainz and ascribed to Johann Gutenberg.

According to the best authorities, this is not an authentic representation of the press used by Gutenberg. It is a wine press.

REGISTER METHOD *for electros on r. o. p. color in the newspaper plant which have not been provided with register marks by the platemaker*

By O. E. PETRY*

**Composing Room Superintendent, Nashville (Tenn.) Morning Tennessean and Evening Banner.*

THE increasing use of r.o.p. color in newspapers has made registering the plates a problem in the average newspaper plant. At first, it was only a routine job for the stereotyper, but when the national advertisers started using plates frequently calling for hairline register, the problem of registering the plates began. As long as the plates had register marks indicated by the platemaker, it was no trouble to drill a hole through the register marks and then put a pin in the base to make easy the changing of plates. However, for the last few months national advertisers have been supplying electrotypes in close register without providing any form of register marks in the plates.

Readers of *Printing Equipment Engineer* may be interested in the method we are using to register color plates coming into our plant minus the register marks. Recently, we printed a 6 col., 200 line national advertisement in black and one color (yellow).*

Our procedure is as follows: We take an offset proof of the key plate, which in this case was the color (yellow), and position the proof on the base in the exact position it is to appear in the paper. Then glue the proof securely to the base.

Our method of taking the offset proof will be described before telling about the balance of the procedure. There are several ways of making an excellent offset proof. We prefer taking these offset proofs by putting the key plate on the base. Without inking the plate a piece of proof paper is laid upon the plate; then place carbon paper face down on the proof paper. If the cut is large, use several

*Editor's Note—A tear sheet of the actual advertisement sent to the editor by Mr. Petry showed perfect registration.

DISPOSING OF OUTMODED EQUIPMENT

AT various times, *Printing Equipment Engineer* has encouraged the idea that outmoded and strictly obsolescent printing equipment of all kinds ought to be destroyed. The thought is that printing equipment, from a productive standpoint, has a useful life span which is terminated by technological advancement. We don't presume to pose as guardian angels of printers or anything of the sort, but we do believe that the industry will be maintained in a more virile state if it were possible to obtain cooperation of printers themselves in the adoption of some such plan.

From time to time, leading printers, individually and collectively, have urged personally and through trade associations that some solution be found for the difficult outmoded equipment problem. Leading equipment manufacturers for years have scrapped such abandoned machines when traded against purchases of new machinery — but the problem still exists. Frankly, the problem is a responsibility of all those engaged in the industry. It could be settled cooperatively.

The latest plan is related to the scrapping of outmoded or obsolete cylinder presses. It is proposed by the Miller Printing Machinery Company which states "The proposal is not advanced as a complete solution of so old a problem, but we do hope it may prove a step in the right direction. If supported by leaders in the industry and by other manufacturers, either in its present or in some modified form, we believe the plan would prove of substantial benefit to the entire industry. It should at least stimulate again thought on the subject."

Without going into complete detail, we print here an abstract of the Miller announcement which is as follows:

Seldom used, obsolete equipment is a prime source of unproductive expense in needless taxes, rent and lost efficiency. The scrapping of much or all of it would be a boon both to the industry and to the individual firm.

Printing machinery manufacturers have contributed their share toward this end when replacing obsolete equipment with new machinery. However, to remove and scrap such outdated, unused equipment *without immediately replacing it* might be equally desirable in many cases.

Therefore, to any reputable concern who, by previous arrangement with us, shall scrap any cylinder press, we are prepared to issue a credit certificate good for five years and in an amount *four times that of the machine's scrap value*, the printer to retain the actual money received as scrap. No immediate new Miller purchase need be made, and even if a credit certificate were never used, the holder will have lost nothing as he will have received in cash the actual scrap value of the machine discarded.

Norway Adopts Plan to Scrap Old Machines

PARALLELING similar attempts to cope with the obsolete printing equipment problem in this country from time to time, an interesting news item appeared in the March issue of *Who's Who In Intertype*. We publish the item without further comment:

"Oscar Skotvedt, Intertype dealer in Oslo, Norway, reports the successful culmination of a machine scrapping idea he has been working on for many years.

"Mr. Skotvedt's plan provides for the scrapping of all typesetting machines twenty-five years old, and was incorporated in an agreement covering the whole country. This was signed by the Norwegian Printers Association and also the Association of Printing Machinery Dealers. It reads in part: 'It has been agreed that no typesetting machine of any kind, which comes in the market or is offered for sale and which is more than twenty-five years old can be sold or taken in account, but must be scrapped.' The plan went into effect January 1, 1940.

"Mr. Skotvedt was also responsible for a similar plan for press room equipment. This has been working to the satisfaction of printers and dealers since 1933.

"At first sight it may appear that the idea is a selfish one benefiting no one but the dealer, but upon closer study it reveals itself as very beneficial to the printing industry as a whole. All equipment in a plant will remain either hopelessly antiquated or definitely modern and a progressive printer will make sure that his plant will stay in the latter class."

pieces of paper being sure that the entire plate is covered. It makes no difference if the carbon paper overlaps. Then put another piece of proof paper on top of the carbon paper to keep it from shifting position when taking the proof. After taking the proof you will have a sharp outline proof of the cut (printed by the carbon paper) in offset position. The proof is now ready to cement to the base.

At several points of register, top and bottom, we rout through the plates close to the printing surfaces. With a file or small chisel, we then trim close to the cut, making sure that the hole is at right angles to the printing surface. In the accompanying pictures the reader can see that we selected the caps of the men at the top and the diagonal rule at the bottom.

We then place the cut on the offset proof which has been cemented to the base and register it in exact position. The cut is then fastened to the base.

For stereo shell casts and zinc we use Elrod base and slugs, while for electros the stereotyper makes a solid base upon which to mount the cut. On the solid base it is necessary to bore several holes through the cut and into the base with a hand drill (we used three on the specimen shown) with a No. 55 drill which makes a snug fit for the nails such as are used by the engraver. When we use Elrod base and slugs, it is necessary to lock up the page

Fig. 1 — Here is a miniature reproduction of an offset proof which is used in registering r.o.p. color plates in the plant of the Nashville (Tenn.) Tennessean and Banner. In this instance, the electrotype plates to be registered were for black and one color advertisement. (Plates were furnished without register marks.) The proof shown here was taken on a proof press by first placing clean proof paper over the cut, then the carbon paper, and finally another sheet of proof paper to prevent slippage under impression. The proof is then cemented to metal base in exact position.

Fig. 2 — In this picture is shown the yellow plate from which the proof shown in Fig. 1 was taken. The arrows indicate where the plate has been opened up and finished close to the printing design with a file, so that when laid upon the proof cemented to the base its exact position with respect to register may be determined. The plate is then tacked to the base as described by Mr. Petry in the accompanying article.

before mounting the proof or the cuts. You can easily drive the nails direct into Elrod base without drilling holes.

After one plate is registered and fastened to the base, it is removed and the registering operation is repeated with the other plate. A little care in removing the plates makes it easy to replace them by putting the nail in the proper hole. No attempt is made to use the same holes for different plates. The holes are so small it does not affect the print in any way. The plates may be removed from and replaced on the base as often as necessary. We print the Nashville *Tennessean* in the morning and the Nashville *Banner* in the afternoon, using the same base and plates for both.

After the page is molded by the stereotyper with one plate, we remove that cut and position the other on the same base in the same page and fasten it, as soon as it is ready to mold. If the stereotyper puts both page mats in the casting box in exactly the same position (and he can because the same head rules are used on both pages) the pressman will have little trouble in printing a good job.

Routing the color plate is the only operation taking any time and that is not much trouble.

We have been using this method for some time and have received praise from the advertising department.

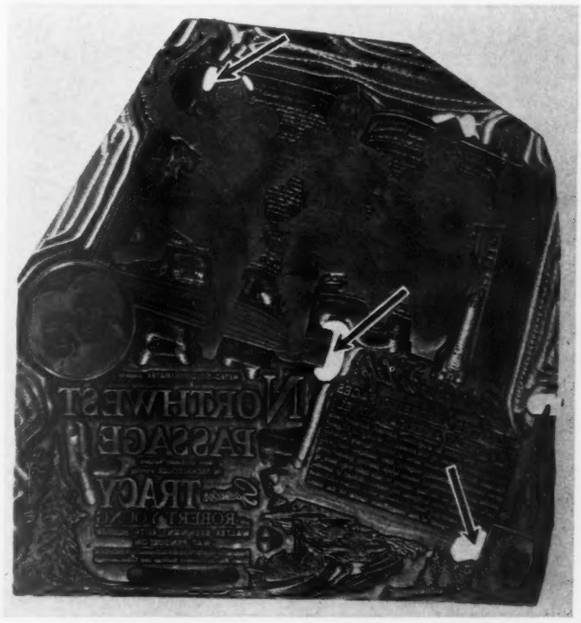


Fig. 3 — The black plate shown here has been opened up at desirable registration points as described for the yellow plate in Fig. 2. The yellow plate is removed from the proof which has previously been cemented to the base. After the black plate's position has been determined, it is fastened to the base with engraver's nails.

Mr. Petry states the black and yellow plates may be removed and replaced on the base as often as desirable without affecting registration position.

Color Rotogravure ... Dultgen Process

By ADAM HENRI REISER

IN THE early 1900's, Mile-a-Minute Murphy set a record for speed by traveling a mile a minute (88 ft. per sec.) Today rotogravure press speeds have been stepped up so that the web on the press, printing four colors one side, and one on the other, travels 1000 ft. per min., producing 32,000 colored supplements per hour, completely folded and bound. In the production of the copper cylinders used on this press, The New York *Daily News* makes use of two types of gravure. In the monotone, or one-color printing, conventional gravure is employed, using the conventional screen with its ratio of 1:3, representing the relationship of the lines of a 175 line screen bear to the spaces between the lines. Multi-color gravure is produced by Dultgen process which makes use of, among other things, the Dultgen screen. The Dultgen process and screen are developments of Arthur Dultgen, Superintendent of Rotogravure, of the *News*.

Similarity Between Conventional and Dultgen Gravure

There are points of similarity between the two processes. For illustration, both make use of the continuous tone negative for the production of the final positive. But the method of applying the screen differs in the two processes. In conventional gravure, a continuous tone positive is made from the original tone negative. The gravure screen is applied to the carbon tissue, after which the above continuous tone positive is also applied. In half-tone gravure, the screen is photographed directly on the positive. Both methods, conventional and halftone gravure, also employ carbon tissue. It is Mr. Dultgen's assertion that there would be no rotogravure without carbon tissue. "God bless carbon tissue," says Mr. Dultgen, "for there is no other known way of getting a variable depth to the cut in gravure work." Another point of similarity between the two methods is this means of securing the inkwells or depth from which printing takes place.

Carbon tissue furnishes the resist, masking those portions of the cylinder which must not be attacked by the action of the acid. Of course, the copper cylinders in both cases are produced by electroplating the copper to the cylinder. No hardening or facing takes place on these cylinders for increasing their life. No chrome plating or any other type of protection is used to get the long runs obtained in the *News* plant. At the time of our visit, five cylinders in one of the presses had withstood a run of 1,355,000 cylinder revolutions, with good prospects for withstanding another million sheets. All of these five cylinders were on the same press, rolling at a speed in which the web travels 1000 ft. per min.

To realize what this means, it is necessary to remember that in rotogravure a doctor blade is used to remove the surplus ink from the cylinder periphery after it has received its bath of ink. Inks used in the process, of course, are very thin and volatile, and are therefore best applied by immersing the cylinder in a bath. Doctor blades that remove the excess ink by scraping, have a normal life of 24 hours. Forced air drying of the ink on the paper is resorted to while the web with its layer of ink travels from one cylinder unit to the next. A distance of 20 ft. between these units is thus given over to the forced drying of the ink.

A mechanical screen is used in both the conventional gravure run in monotone on the inside of the *News* supplement, and in the special color process used for all color pages. The difference, however, lies in the kind of mechanical screen used. A conventional gravure screen is a special screen for gravure that is used in a vacuum printing frame, whereas the halftone screen for gravure is similar to the halftone screens used for the other graphic art processes. In the conventional gravure type, the common screen with its 1:3 ratio for 175 lines; or its ratio of 1:2.5 for its 150 line screen, is employed. The screen used for the color work, however, is the special invention of Arthur Dultgen, and is one of the features of his process.

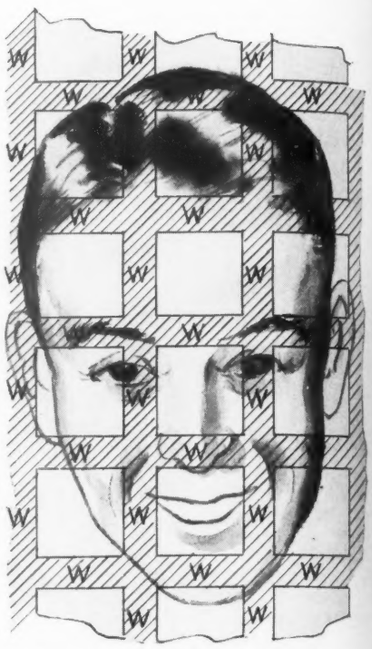


Fig. 1—Enlarged diagrammatic presentation of carbon tissue screening and exposure principle of conventional gravure: (a) The first shot on the carbon tissue hardens all areas marked W; these represent the walls or bridges between the dots. The open squares left in white have been unexposed to light at this stage, and (b) the second shot is through the continuous tone photograph, represented by the sketched figure. This time the light action hardens the gelatine all over to the degree in which the light penetrates the positive. Where the light already has hardened the areas W, another attack is permissible. However, the unexposed areas have their deposit of gelatine hardened wherever the positive fails to hold back the light through protection by work. These protected areas are therefore extremely soluble and develop out under action of the water developer.

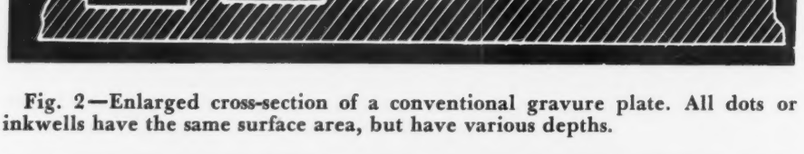


Fig. 2—Enlarged cross-section of a conventional gravure plate. All dots or inkwells have the same surface area, but have various depths.

Fig. 3—Enlarged cross-section of a halftone gravure plate. Here the dots are combined with variable depths.

Some Dultgen Improvements

Occasionally, when multi-color gravure work was printed, screen angles were

(*Continued on Page 34*)

Carefully Prepared Patterns Are Required For Molded Rubber Plates

By J. HOMER WINKLER

THE printing quality of molded rubber plates is largely determined by the mechanical suitability of the material furnished for duplication. The amount of makeready required in printing from this type of plate is determined by this printing quality and depends upon the uniformity of printing plane of the rubber plate as well as the uniformity of plate thickness, (assuming satisfactory printing conditions are otherwise present). Molded rubber plates may be made from type, photo-engravings, electrotypes, stereotypes and any combination thereof.

Fig. 1 — Properly Prepared Zinc for Molding Rubber Plates. (Direct top view.) The subject is a 16 gauge (0.065 in.) reverse position zinc for printing on the inside of cellophane. Note ½ in. border (0.065 in. high), deep and close-routed interior (0.015 in. high). This method of preparation is also suitable for electrotypes and stereotypes.

Type should be very carefully justified and locked securely in steel chases. A more rigid lockup is required than for electrotype molding. Obviously all of the type characters, slugs, rules, etc., should be the same height and carefully checked for this feature. Porous linotype slugs and monotype characters will fail under the molding pressures. Shoulder high solid face metal spacing should be used throughout. No wood or open metal furniture should be used. A bearer ½ in. width shoulder high material should be placed around the outside edges of the printing surface. All photo-engravings, electrotypes or stereotypes included in the form should be on metal base. A type high bearer of at least ¼ in. face should be placed at the outer edge of the shoulder high bearer and the entire form locked as tightly as possible after planing.

It must be realized that the subject being reproduced is laid face up on the press platen and the matrix material is placed on top of it. The matrix material is pressed downward, when plastic, and completely fills the subject, thus forming the mold. If there are any openings in the form or spaces between units or characters in the form, the matrix material will be forced in. Possible damage to the mold may then result when it is removed. At least it will be very difficult to remove the material squeezed into the open space of the form.

Photo-engravings, electrotypes, and stereotypes should have the same type of preparation. All dead metal should be routed out of the printing area. A space of ½ in. of open space should be left outside of the edges of the printing area. A bearer of ¼ in. to ½ in. face width should be left outside of this space of printing face height, (*i. e.*, 0.065 in. for photo-engravings and 0.052 in. for electrotypes and stereotypes). All routing should be of uniform depth and at least type shoulder depth. In cases where relief greater than type shoulder depth is desired in the rubber plates, the specified depth should be present in the patterns or originals furnished. The plates should be free from edges, have good depth, no undercutting or damaged letters. Defective portions should be repaired or replaced.

Where the rubber plates are to be used on cylinders for rotary printing, allowance must be made for their stretch. As a plate is placed around a cylinder, the printing area becomes longer in the direction of curve than when the plate is flat. This stretch varies according to the diameter of the cylinder, thickness of plate, and nature of the subject. Type and open subjects will stretch more than a solid. Type forms and metal patterns may be pulled in a predetermined amount in the direction of curve to allow for this stretch. It is also common practice to prepare "non-stretch" rubber plates by incorporating various materials with the rubber during their manufacture to prevent their opening up on curving.

It is not satisfactory at best and in most cases not possible to repair defects in molded rubber plates. It is essential that careful attention be paid therefore to the preparation of the material that is to be duplicated in rubber. The more nearly perfect this material comes to the rubber plate maker, the better will be the printing results (all other factors being equal). Less make-ready will be required and cleaner and sharper printing will result.

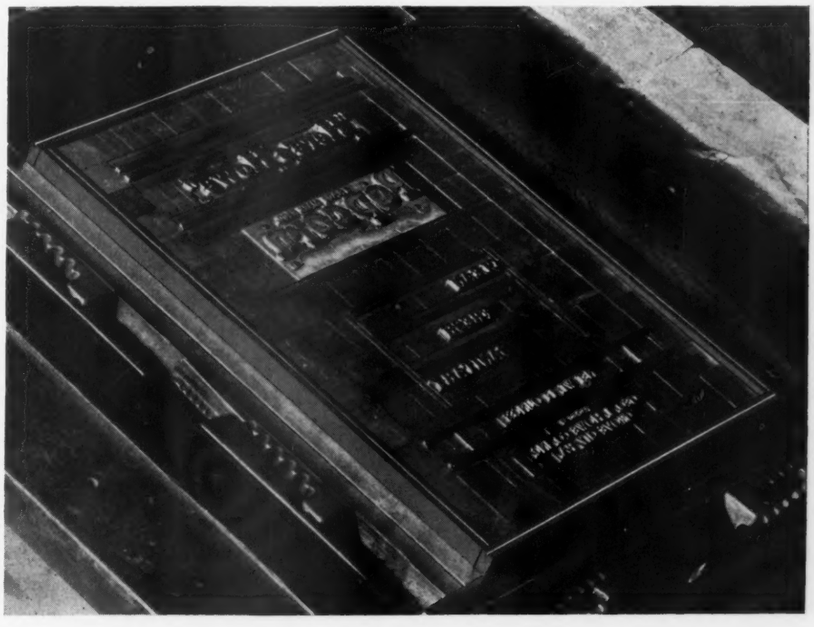
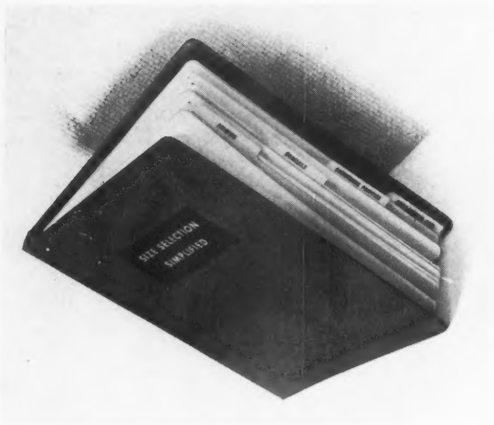


Fig. 2. — Type Form Prepared for Molding Rubber Plates. Note outside typehigh bearers (2-pica face), inside shoulder-high bearer (about 3-pica width) and metal mounted zinc. All material used is type shoulder high and form is solid (i. e., no open spacing material).

Elected President

Neal Dow Becker, president of Intertype Corporation, was recently elected a director of Bank of the Manhattan Company, one of the large banking institutions of New York, N. Y.



Size Selection Simplified contains four sections—sheets give data on sheet sizes which will cut without waste from standard paper and impose efficiently for standard press equipment.

BOOKS
RECEIVED

Book for Planning Printing

W. JOUETT BLACKBURN has published under the title Size Selection Simplified, a reference book which will enable any printing executive to choose the most suitable size for both advertising and commercial printing from a wide range of pre-checked dummy and flat sheet sizes, any one of which will cut without waste from a standard paper size and impose efficiently for standard press equipment.

The book gives (1) a wide choice of "pre-checked" sizes for various kinds of printing jobs, (2) envelope information keyed to these efficient printing sizes, and (3) all the other size data needed for planning and producing printing, such as flat sheet sizes and press specifications.

Author states executives other than himself helped plan the book. These people also contributed data and text material drawn from their own varied and practical experience. Because of this collaboration, estimators and production managers will use the book to check stock requirements and impositions, to plan combination or gang runs, and to determine which press will print a particular job most efficiently. Printing salesmen will find it an invaluable aid in helping customers to get the most value for their printing dollars. It gives designers, advertising men and buyers of printing hundreds of efficient sizes from which they can choose with complete assurance that there will be no waste or costly delays and difficulties in production.

All the essential information is presented clearly and concisely, and with an irreducible minimum of theory and explanation. Charts, tables, diagrams, and text are arranged and indexed so that anyone—from an inexperienced designer to the most production-minded printer—can easily find the data he needs for the job in hand.

The compiler and publisher, W. J. Blackburn, has had years of practical experience himself, both as estimator and assistant manager of a printing plant and also as a layout and contact man working in close collaboration with advertising executives and buyers of printing.

Size Selection Simplified, *a practical guide to the efficient planning and production of folders, booklets and commercial printing. 64 pages, 8½ in. by 11 in., printed on 100 lb. white offset stock bound in Fabrikoid cover, loose-leaf form for insertion of additional reference material. Durably bound for hard usage. New York: W. J. Blackburn, Compiler and Publisher. $12.75, may be ordered through* Printing Equipment Engineer.

Rami Type Specimens

A VERY practical type specimen book has just been published by the Department of Publishing and Printing, Rochester Athenaeum and Mechanics Institute. It is entitled *Rami Type Specimens*. The book was produced by the Department of Publishing and Printing. It is 9 in. by 11½ in. size, bound in heavy cover with semi-exposed Cerflex binding.

The arrangement of the book is such that type material from Ludlow, Intertype, APL, Linotype, Bauer, ATF, and Monotype are separated by tabbed index sections. The book contains all alphabets, in cap and lowercase lines, of about 400 sizes and faces in the Department's composing room. Specimen lines are set 42 picas wide and are printed over pica spaced vertical faint lines.

Concentrated copy fitting instructions are printed on one page. One-line specimens up to 24 pt. show the number of letters per pica in each legend. Other sizes are traced for comprehensive layout. Type specimens are printed by family, *i.e.*, different sizes of the same family appear together. Two-letter matrix combinations are printed in succeeding lines.

Says Technical Supervisor R. R. Karch: "Although this style of specimen book may not work out in regular production, it is just what we feel is needed in the teaching of layout and copyfitting." To which we remark: This specimen book would be a creditable piece of work for any printing plant in the country. Meticulous craftsmanship and artistic arrangement particularly are in evidence. The index is complete.

The Modern Newspaper

HARPER & Brothers were scheduled to publish early in April *The Modern Newspaper — Its Typography and Methods of News Presentation*, by John E. Allen, Editor of *The Linotype News* and author of a previously published volume entitled *Newspaper Makeup*.

Among the subjects discussed and illustrated in the book are: Newspaper "streamlining"; departmentalization of the news; front-page digests of the news; week-end summaries of the week's news; non - conventional, non - standardized writing of the news; "background precedes" with important stories; modern front pages; recent prize winners; the modern tabloid and some future experiments in that field; many of the things to do and not to do when modernizing the dress of a newspaper, and some arresting comments concerning the newspaper of the future.

The book ($3 per copy postpaid) contains more than a hundred illustrations of important points in modern newspaper makeup and a modern head schedule. Copies may be ordered from Harper & Brothers, New York, N. Y., or any agency of the Mergenthaler Linotype Company.

Chemistry of Photography

THE purpose of *The Chemistry of Photography*, a new edition of which has recently been published by Mallinckrodt Chemical Works, is to supply a demand from photographers for a simple explanation of the chemistry of photography. While published primarily for photographers as such, no doubt it will be invaluable to all photo-engravers. Publisher states in the introduction: "So many troubles are likely to occur in the art of finishing photographs that we have endeavored to point out the basic causes of the more common ones, with definite suggestions for their elimination."

Principal content is as follows: History of Photographic Chemistry, Chemistry of Development, Chemistry of Fixation, Chemistry of Toning, Chemistry of Reduction, Chemistry of Intensification, Tips and Tables for Photographers.

Under the chapter, "Tips and Tables," are discussed Temperature Control, Differences in Action and Effect of Common Developing Agents, Water—Its Importance and Methods of Purification, Adding Correct Amount of Bromide, Weights and Measures, Metric System, Formula for Diluting Solutions, Rules for Storing Chemicals, How To Open Glass-Stoppered Bottles, Cleaning Trays and Tanks, "Metol" Poisoning, Removing Developer Stains from the Hands, International Atomic Weights, Carbonate Conversion Table, and others. Chemicals manufactured by Mallinck-

(*Continued on Page 16B*)

WHEREVER YOU ARE THERE'S A PLANT TO SERVE YOU

Sinclair and Valentine Co.

Main Office and Factory: 611 West 129th Street, New York

Fifty Years of Service to the Graphic Arts

BOOKS

(*Continued from Page 16*)

rodt are discussed freely to give essential information. A list of Chemicals and their symbols is also given.

The Chemistry of Photography, published by Mallinckrodt Chemical Works, Second and Mallinckrodt Sts., St. Louis, Mo. Size 6½ in. by 9 in. Wire O-bound in cloth. 109 pages, many illustrations. Thumb spots along the edge of the book assist the reader in finding any particular chapter by flexing the pages to expose the spot. Price 50c.

Carnegie Alumni Reunion

The 1940 Alumni Reunion of the Department of Printing at the Carnegie Institute of Technology will be held on April 19 and 20. At the same time the Advisory Council on Graphic Arts Education will convene on the Carnegie campus. The two groups will jointly participate in technical sessions devoted to discussions of problems of graphic arts design and production, plant management, advertising production, and marketing.

The following associations and institutions will participate in the formation of the Advisory Council on Graphic Arts Education:

Advertising Typographers of America
American Institute of Graphic Arts
American Newspaper Publishers Association
American Society of Mechanical Engineers
Associated Business Papers
Book Manufacturers' Institute
Carnegie Institute of Technology
Institute of Paper Chemistry
International Association of Electrotypers and Stereotypers
International Association of Printing House Craftsmen
International Trade Composition Association
Lithographic Technical Foundation
National Association of Photo-Lithographers
National Association of Printing Ink Makers
National Association of Printers' Roller Manufacturers
National Graphic Arts Education Guild
National Gravure Printers' Association
National Printing Equipment Association
Pennsylvania Newspaper Publishers' Association
United Typothetae of America
Young Executives of the Graphic Arts

Cooke Now Representative

Arthur H. Cooke, who for several months has been serving as acting New England representative of the Mergenthaler Linotype Company, has been made New England representative. Announcement of Mr. Cooke's promotion was made by Walter B. Patterson, Mergenthaler director of agencies.

Bulletin Available

Logan Engineering Co. has available Bulletin 340 which explains in detail operation of the Aridifier for removing moisture, oil and dirt from compressed air and gas by centrifugal force, in composing room, pressroom and bindery.

Error in Title

In the Santa Ana (Calif.) *Register* new building story appearing in the February issue of *Printing Equipment Engineer*, it was stated erroneously that George Ashman is both Composing Room Superintendent and Press Foreman. To correct the error (especially for the many friends of Mr. Lawrence who wrote to him after reading the story) we wish to inform our readers that William Lawrence is Superintendent of the Composing Room, while Mr. Ashman is Press Foreman. Mr. Lawrence supplied the material for the story.

Elected President

At a special meeting of the Board of Directors of Wm. F. Fell Co., held on March 2, Frank J. Fell, jr., was elected President. The 64-year-old business will be operated without change.

21st Convention Plans

Hartley E. Jackson, past-president of the San Francisco Club of Printing House Craftsmen, has been selected to call together representatives from every local group who will be interested in fostering the celebration of the 500th anniversary of the invention of movable type.

San Francisco, the largest printing center in the West, is anxiously awaiting August 4 when it will bid welcome to delegates to the XXIst International Convention and the 15th Pacific Society Conference.

The convention committee of the San Francisco Craftsmen's Club is formulating a series of programs of educational and entertainment merit for the XXIst International Craftsmen's Convention to be held at Palace Hotel, August 4 to 8. In the tentative plans for the Educational Program, Walter F. Schultz, Chairman of the International Educational Commission, states there will be no conflicting clinics held at the same hour this year. All Craftsmen will have the opportunity of attending *every* educational discussion if they so desire.

Advance registrations and hotel reservations may be made with Ivan Giusti, 500 Sansome Street, San Francisco.

Perfumed Ink Advertisement

On Friday, March 15, the San Diego (Calif.) *Tribune-Sun*, Long Beach *Telegram* and Oakland *Tribune* published a run-of-paper color advertisement (black and yellow) for Kay Jewelry Company. The yellow ink was scented with orange blossom perfume. Production Manager Gregg states this is the first perfumed advertisement (with essential oil mixed in the ink) to be published in San Diego, and probably on the entire West Coast. He also states that rose, violet, heliotrope, gardenia, carnation and orange blossom-perfumed inks are being offered advertisers by his paper.

King is Busy

Howard N. King, typographic consultant for Intertype Corporation, on May 4th will talk before the delegates to the 7th District Conference in Richmond, Va.; on the 5th by the Southern Master Printers Association, Natchez, Miss.; on the 7th by the New Orleans Ad Club, and on the 15th by the Buffalo League of Advertising Women. On June 6th, Mr. King will address the Richmond, Va., Craftsmen.

EQUIPMENT SALES

Recent Linotype Installations

The Hartford (Conn.) *Newsdaily* has installed three Linotypes and the Courier-Citizen Company of Lowell, Mass., has added three Blue Streak machines.

One or more Linotypes have been installed by the Madison (Wis.) *Capital-Times;* Ottawa (Ill.) *Daily Republican-Times;* Glenrock (Wyo.) *Independent;* Homer Landau and Company, Inc., Chicago; Louisville (Ky.) *Courier-Journal* and the *Times;* Franklin Press, Inc., Norwich, Conn.; Aroostook Republic, Caribou, Maine; Creative Printing and Publishing Company, Chicago; Phillips and Van Orden Company, Inc., San Francisco; Benld (Ill.) *Enterprise;* National Tag Company, Inc., Dallas, Tex.; Spokane (Wash.) *Spokesman-Review;* Longview (Wash.) *Daily News;* Gorham Press, Taunton, Mass.; Ashland (Wis.) *Daily Press;* Green Bay (Wis.) *Press-Gazette;* Darby Printing Company, Atlanta, Ga.; Harrison County Examiner, Biloxi, Miss.; William E. Londergan, Northampton, Mass.; Thomaston (Ga.) *Free Press;* John F. Brady and Ernest Schwab, Teaneck, N. J.; Wilmington (Del.) *Journal Every Evening* and the *Morning News;* Superior Typesetting Company, Toledo, O.; Beattyville (Ky.) *Enterprise;* Morton Printing Company, Inc., Pontiac, Ill.; Abilene (Texas) *Reporter-News;* Ryerson Press, Toronto, Ont.; Berea College, Berea, Ky.; Bowling Green (Ky.) *Times-Journal;* Galion (O.) *Inquirer;* Rockland (Mass.) *Standard;* Middletown (O.) *News-Journal* and the *Journal; South End Reporter,* Chicago; Carlsbad (N. M.) *Current-Argus;* Rand, McNally and Company, Inc., Chicago; Charles P. Hackett Press, Wyandotte, Mich.; Libertyville (Ill.) *News;* Grays River (Wash.) *Builder;* Montebello (Calif.) *Messenger; Shoppers Guide,* Norfolk, Neb.; Canyon (Texas) *News;* Winchester (Tenn.) *Truth and Herald;* Ernest Wiburn Bracewell, Huntsville, Texas; Defiance (O.) *Crescent-News;* Chambersburg (Pa.) *Public Opinion;* Danville (Ky.) *Advocate-Messenger;* Henderson (Ky.) *Morning Gleaner* and the *Evening Journal;* Jensen Printing Company, Minneapolis, Minn.

Goss Equipment Sales

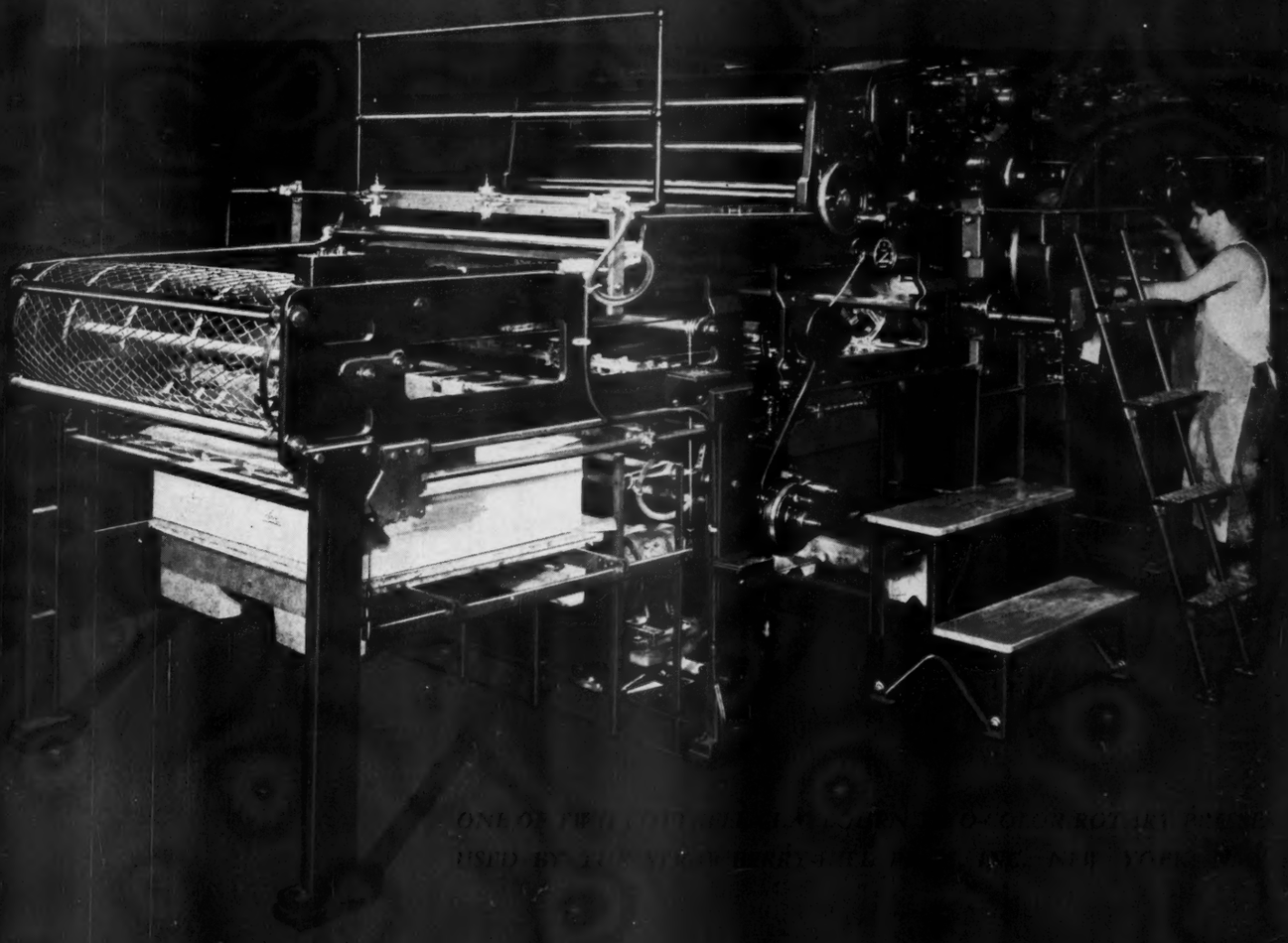
The Chicago *Times* has ordered six new Goss High Speed Anti-Friction Units with one pair of tabloid folders to be mounted on deep wall-type brackets and cast-iron substructure. Hypoid driving gears will be used with unit type motors. All units will be equipped with ink mist enclosures.

The Des Moines *Register and Tribune,* announced by Goss, has purchased four new Goss High Speed Anti-Friction Units with a pair of High Speed Anti-Friction Folders with two deliveries. This press will be equipped with tabloid and ribbon slitters, nested angle bars, and two heavy duty color arrangements. It will be mounted on four sets of heavy duty cast-iron substructure. Hypoid gear arrangements will be used with individual motor drives.

The Johnstown Tribune Publishing Company, publishers of the Johnstown (Pa.) *Tribune and Democrat,* has purchased a five-unit High Speed Anti-Friction Press with ink mist enclosures, a pair of folders, two sets of nested angle bars, and slitters for tabloid products. The press will be housed in a new addition to the *Democrat* plant. It will be mounted on a cast-iron substructure which will be installed on a specially designed foundation that will place the press at sufficient height to avoid any possible flood damage. Other new equipment includes a conveyor, motor drive, paper break detectors, and sheet severing devices. A new stereotype metal furnace and vacuum former have also been ordered.

Five concerns have recently purchased Goss 44-G Curved Vacuum Casting Boxes, according to The Goss Printing Press Company. These installations include the Chicago *Tribune;* Minneapolis *Star-Journal; O Globo,* Rio de Janeiro, Brazil; Van-Bolt Kreber Electrotype Company, Columbus, and National Rotary Printers, Akron, O.

"4,900 two-color sheets per hour . . . and we're gradually doing better"



Cottrell

Having muddled through the diaper and adolescent stages of illustration, newspapers now plan layouts to combine art with news value. This layout, while not new in design, is new in a technique evolved by Superintendent William Ludwig of the Chicago Times engraving department.

Etching courtesy Chicago *Times*

LAYOUTS *with photo-montage effects for newspaper illustration can be made in art department with co-operation of engraver.*

By STAFF WRITER

IN THE early days of photo-engraving, a layout consisted of a number of etchings, mortised and fitted together. The result, as a rule, was not a harmonious combination and generally was made up of etchings from the morgue plus one or two new ones to bring the whole up to date.

Larger newspapers, with the commendable desire to print illustrations in a more artistic form, developed art departments. (By the way, many crimes have been committed in the name of Newspaper Art.) For many years, retouching consisted only of painting out an undesirable portion of the subject matter or indiscriminately painting in uniform light or dark backgrounds on portraits.

At first, layouts consisted of photographs pasted up on cardboard with a square finish on the whole plate. Later, white and black lines were drawn in to keep separate the subjects.

The lack of uniformity of photo color value soon made it necessary for the engraver to photograph portions separately, to add or subtract color. Gradually, the burden was completely shifted to the engraver who was provided with a dummy layout and individual photographs.

Shortly thereafter, line combination layouts were introduced and the artist ran riot with curlicue designs so that on many layouts the border of the etching totally obscured the news value of the illustration.

Having muddled through the diaper and adolescent stages of illustration, the great majority of newspapers are now planning layouts to combine art with news value. The accompanying illustration, while not new in design, is new in a technique evolved by Supt. William Ludwig of the Chicago *Times* Engraving Department.

This form of layout can be made completely in the art department by pasting up photographs, retouching, and covering the edges of individual photographs so the paste marks will not show. It is seldom, however, that all photographs will match for size which then calls for extra copying.

In this case, several of the photographs were pasted on a black card, the balance were unmounted, retouched and blended to black on the edges. Or one group can be pasted in position, the second group pasted on red celluloid, properly positioned so that overlap occurs only where it is desired to blend two photographs together. (A good example of a blend is the arm of the young lady in the upper left part of the picture blending through the hair of the young lady in the center photograph).

Where blending of two photographs is desired, the tones overlapping are grayed down so that the combined exposure will not form a choked highlight. The subject required to stand out in the blend remains lighter.

The first section of the layout is photographed on the engraver's camera, with the copy carefully positioned. The usual detail and highlight exposures are given but *without* flash. This copy is removed, the second substituted and the same exposures made. Then, an overall flash exposure is given and the negative is developed as usual.

While Staff Writers were discussing the unusual procedure with Mr. Ludwig, we learned that this is not considered an unusual job in the *Times* plant. Mr. Ludwig said "We handle a great deal of work for our newspaper in addition to others, and every day we devise new methods to cope with any special request for unusual effects."

Intertype Cuttings

Among the new two-letter cuttings announced by Intertype Corporation this month are 8 and 10 point Beton Extra Bold with Oblique, 12 point Gothic No. 34 with Gothic No. 35 and 18 point Vogue Extra Bold with Vogue Bold Oblique, examples of which are shown here.

THIS paragraph is set in the 8 point size of Intertype Beton Extra Bold *with Oblique* 12345

8 Point Beton Extra Bold with Oblique

THIS paragraph is set in 10 point Beton Extra Bold *with Oblique* 1234567890

10 Point Beton Extra Bold with Oblique

ABCDEFG 23
ABCDEFG 23

12 Pt. Gothic No. 34 with Gothic No. 35

ABC abcdefghi 123
ABC abcdefghi 123

18 Point Vogue Extra Bold with Vogue Bold Oblique

How the AUTOPASTER
Promotes Economy and Better Presswork

1 Increased production — resulting from consistent operation at full speed.

2 More uniform printing — due to the elimination of slow-downs and speed-ups.

3 Fewer web breaks and less waste. Uniform speed prevents undue strains on webs and eliminates unevenly folded products.

WRITE FOR FOLDER

Wood Newspaper Machinery Corporation

PLAINFIELD, NEW JERSEY • NEW YORK OFFICE: 501 FIFTH AVENUE

NICKEL INK — *New Metallic Ink Development — pure nickel pigments produced by recently perfected method said to offer advantages in color tones and in resistance to corrosion and tarnish**

SOME new possibilities in producing metallic effects are offered the printer by a recently perfected method which now makes pure nickel pigments available for the manufacture of nickel ink. The product is of too recent origin to measure the extent of its application, but research both in the laboratory and pressroom indicates that it has a number of advantages which previously have never been realized in metallic inks.

These advantages include a greater accuracy of color tones in reproducing certain effects not served by other metallic inks available at the present time. The color is darker and of greater tone depth than that effected by other white metal pigments.

Nickel ink is able to transfer to paper and other media the appearance of nickel and nickel alloys, as well as other metals, including silver, steel and iron. It can be burnished, if desired, to increase its luster to that of polished nickel.

One highly important indication furnished by the laboratory and pressroom studies which preceded the use of the ink was that nickel ink has an exceptionally high resistance to tarnishing by air. This, in addition to the fact that the nickel pigments generally share the corrosion resistance of the parent metal, suggests the possibility that nickel ink may be used under conditions involving exposure to various acids, alkalies—including caustic soda and salts such as sulphates and chlorides—as well as other chemicals. Practical applications of these properties, of course, could include printing on labels, wrappers, and similar containers for soaps and other products containing bulk chemicals and foods often corrosively destructive to metals.

In the pressroom, experience revealed that there was less tendency of a single impression of nickel ink to rub off from friction than is the case with a number of other inks using metallic pigments as a base. As with all metallic inks, better results were obtained on coated paper than on soft finish, absorbent stocks.

Excellent results have been realized however, even on green cover stock in which both texture and color would be expected to detract from the metallic effect of inks.

It was also indicated in the pressroom that the nickel pigment is readily formed into a uniform working ink which may easily be standardized or adjusted to the particular conditions of a printing job. It can be dispersed satisfactorily in a suitable silver ink varnish without any further agents. The pressroom also furnished satisfactory evidence that nickel ink will lend itself to special dispersion methods as practiced with other metallic pigments to still further increase its working and coverage qualities.

During the series of tests, which covered many weeks of laboratory and practical study, it was found that good coverage, smoothness, density, and brilliance are readily obtained in letterpress printing with nickel ink. Together with suitable brilliance, there was found to be a richness and warmth of tone not always effected by other metallic pigments.

In printing, it generally was found advantageous to decrease somewhat the penetration into the paper as compared with silver ink in order to hold more of the nickel pigment on the surface. This same result may also be accomplished by a sizing. The resistance to rubbing off of the pigment makes this operation especially practicable.

The nickel pigments are made by a special process developed by Metals Disintegrating Company, Inc., Elizabeth, N. J. Pigment for use in printing is a minus 325 mesh product having a covering value of about 4,000 square centimeters per gram as measured in water.

The research and development department of Edward Stern & Company, Philadelphia printers, carried out the studies of the use of nickel ink in the pressroom.

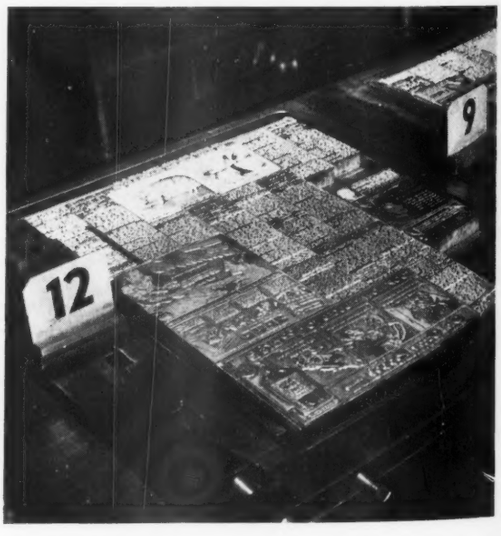
*Printed by permission of *Inco*, winter edition, published by the International Nickel Co.

Page Number Signals

THE idea of eliminating the necessity for asking questions or for spending time hunting a page before edition time in a newspaper composing room is a good one, especially where editions run into a considerable number of pages. This has reference to the makeup editor who might want to inquire about any page in the edition, or even to inspect the page himself; it's also an excellent idea when an advertisement is to be delivered to the makeup by the ad alley because delivery can be made directly to the page in which it is to appear; in cases where an advertisement has been made up in a form, the one who is to make the correction can locate the advertisement readily by the signal; in case the makeup editor instructs a story to be continued, for instance, on page 6, the makeup can locate the page in which to put the balance of the story without loss of time, and finally, the composing room superintendent and men in the makeup department can locate a page readily.

This is accomplished by Deo Padgett, Cleveland *Plain Dealer* Composing Room Superintendent by providing the makeup department with indicating signals bearing the page number in large figures (120 pt.). The page number is shallow etched on both sides of a zinc plate, 3¼ in. high by 3⅝ in. wide set into a slotted wooden base. The illustration conveys the idea. While the page is being made up, the makeup man sets the signal bearing the page number upon and at one side of the chase.

Here are shown a couple chases resting upon a makeup table in the Cleveland Plain Dealer composing room. The numbered signals correspond to the page folio numbers. The signal figures can be seen clearly from a distance.



2 Steps to Greater Profits!

STEP No. 1 . . . . . .

Do you have a sadly neglected stereotyping department? Many do, but many others are doing something about it. That "something" is to bring their stereotyping up to the modern, efficient level of their other departments with a Hammond EasyKaster "8". This popular machine saves plenty of time and hard work. It is available with and without 800 lb. valve-controlled melting pot.

STEP No. 2 . . . . . .

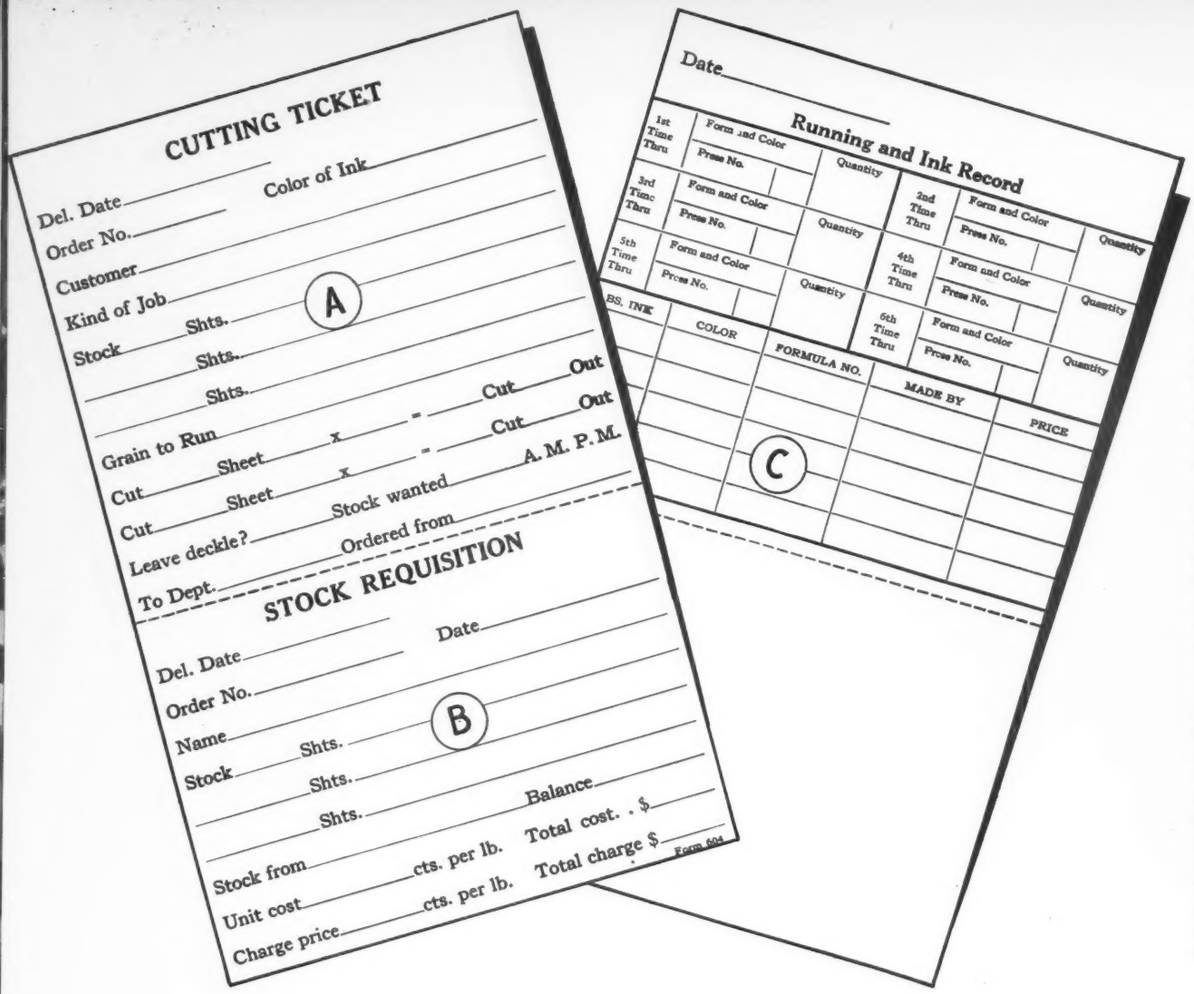
Unless you have a Glider or Gliders in your composing room your sawing is way behind the times. 1100 plants have discovered during the past four years that the Glider obsoletes all others and tremendously contributes to composing room efficiency. Composing room men say that, among a host of advantages, the Glider cuts sawing time one-third.

Your request will bring complete descriptive matter and prices

Hammond Machinery Builders INCORPORATED

KALAMAZOO, MICHIGAN, U.S.A.

1604 DOUGLAS AVENUE



Paper stock Cutting Ticket used in the plant of A. S. Gilman, Inc., Cleveland. The upper section of ticket (A) is made out in duplicate and sent to the stock room. At the time of delivering paper to the pressroom, the stock man inserts the blue cardboard duplicate between lifts for the pressroom foreman's information. Section (B) of the ticket is filled out in the superintendent's office only when it is necessary to order stock from the paper supplier, otherwise it is discarded at the time of making out section (A). The reverse side of the ticket (C) is filled in by the pressroom foreman. Data indicates press spoilage and ink data. The pressroom foreman returns the blue card to the superintendent's office where it is filed alphabetically by customer's name for reference in case of repeat order for the same job at a future date.

CUTTING TICKET *containing*

complete instructions, running and ink data used in commercial printing plant's production system

By ED SAMUEL*

**Superintendent, A. S. Gilman, Inc., Cleveland, Ohio*

ONE of the blanks used in our production system and which we feel is very useful, is called a Cutting Ticket. The function of this ticket, of course, is to make the paper stock specifications fool-proof and virtually automatic. The ticket eliminates verbal instructions, contains all information necessary for the stock man to get out the kind and quantity of stock for a job for delivery to the pressroom at the proper time. After the stock man has delivered the paper to pressroom, he inserts the duplicate (or cardboard) copy between two lifts of the paper so that the pressroom foreman may refer to it.

First we will describe the ticket which is 4½ inches by 7 inches. The top sheet is 16 pound white bond. The second sheet is blue 9 point check board. The ticket is filled out in the superintendent's office. The blue copy is sent to the stock man, and as will be seen, contains all the necessary information.

The perforated lower part of the ticket is not used except when it is necessary to order stock from the paper house, in which case the lower or requisition part of the ticket is sent to the paper buyer. Otherwise, the lower part of the ticket is discarded.

The reverse side of both the original and duplicate contains press running information and an ink record, so that if a repeat order for the job comes into the plant at a future date, information not only about the stock but about press sheet spoilage and ink data may be referred to. The blue tickets are filed alphabetically by customers' names to be used for future reference. The white or original is sent to the shipping department. In the upper left corner the date is inserted when the job is wanted for delivery. The shipping department files these white copies according to the day noted in the upper left corner. When that date arrives he removes the tickets and upon scrutinizing them it gives him a schedule of the jobs he is to deliver that day.

The blank spaces on the reverse side of the blue tickets are filled in by the pressroom foreman who returns it to the superintendent's office after the job has been completed.

By way of explaining how the pressroom foreman fills in the reverse side of the blue Cutting Ticket, we will assume that a job of 20,000 is required to be produced, four times through the press. Stock requisitioned is 21,000 sheets. First time through the press, the press counter shows 20,900 sheets; second time through, 20,800; third time through, 20,600, and fourth time through there are 20,400 sheets.

When the customer at a later date sends in a repeat order, he is assured a duplicate job so far as the ink is concerned because the ink data which is filled in the lower section of the reverse side of the card can be referred to by the superintendent.

TOOT BIG ...TOOT LITTLE

They all do Best on

CHAMPION PAPER

Printed matter does a fine job of trumpeting for any advertiser, whether he goes at it in a big way or with a small appropriation. You give the customer the most for his dollar when you print his job on Champion paper.

Coated, uncoated, offset, cover, envelope, and board . . . you'll find them all just a little better. As the largest maker of printing papers, Champion has the research and plant facilities necessary to attain these greater values.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI

Perfumed Color Ad *in newspaper demonstrates what can be done if art and layout are prepared in sympathy with limitations of mechanical equipment*

By STAFF WRITER

ONE of the best examples of newspaper advertising color printing in a regular daily edition that has come to our attention in recent months is the 6 col. 16 in. advertisement which appeared in the Thursday, March 21 issue of the San Diego (Calif.) *Tribune-Sun*. Aside from the gardenia perfumed feature of the advertisement, Production Manager K. L. Gregg states that this particular color advertisement is "the answer to a mechanical executive's prayers for the right kind of art work and material." He gives credit freely to Mrs. Donna Torrey, advertising manager for the Biltmore Florists in Los Angeles and the Exclusive Florists in San Diego, both companies being operated under the same ownership.

The advertisement originated in Los Angeles and was also printed in the Los Angeles *Times* for March 20.

To give our readers some idea as to the appearance of the advertisement, a miniature reproduction accompanies this article. With the exception of the roses which were printed in red and the leaves reproduced in natural green with brown shading, the flowers were shown in white and pastel colors with yellow tinted and green-yellow tint background. The lilies and gardenias appeared in white. In the miniature reproduction, the reader will note that the delphiniums "bleached out" in making the cut but in the advertisement they appeared in light blue and dark blue. The orchids are shown in orchid color (or should we say lavender?). The tilted panel is white and the type is printed in black.

Mrs. Torrey supervised the planning of the layout and she followed through all the way, even to the mixing of the ink. To avoid upsetting the working qualities of the Morrill perfumed color inks, the following quantities of essence of gardenia were used: 2 oz. to 1 lb. yellow; 4 oz. to 1 lb. red, and 6 oz. to 1 lb. of blue ink.

The zinc plates furnished by the advertiser were used by the Los Angeles *Times*, and the San Diego *Union* and the *Tribune-Sun*.

Production Manager Gregg states that the color stereotyping in the San Diego papers was in charge of Harry Lindsay; presswork supervised by Assistant Pressroom Foreman Homer Stanhope of the *Tribune-Sun* and Assistant Pressroom Foreman Harry Swift of the *Union* pressroom. At other times, states Mr. Gregg, these men with their working force have put in much more work and worry without obtaining as satisfactory results because of inferior materials.

The usual pre-makeready on the back of the Wood mats was used. With the press setup existing in the San Diego plant, the three most important colors were printed on one unit to maintain close register. The yellow color in this instance is the only one printed on a separate unit.

Wells Promoted

Val L. Wells has been appointed assistant mechanical superintendent of the Des Moines *Register* and *Tribune*, according to an announcement made by J. F. Pezdirtz, mechanical superintendent of the newspapers. Wells will have supervision of all mechanical departments and mechanical executives under Pezdirtz's direction, in addition to continuing his duties as pressroom superintendent of the *Register* and *Tribune*.

In April, 1924, Wells came to the *Register* and *Tribune* as night foreman on

Val L. Wells, Des Moines Register and Tribune

the Des Moines *Register*, then became day foreman, and in January, 1933, when Pezdirtz was appointed mechanical superintendent, Wells became pressroom superintendent of both papers.

He has been active in American Legion affairs since coming to Des Moines, having served as commander of Highland Park Post, commander of the sixth district, and vice-commander of the Iowa department of the Legion. He has also served as president of Web Pressmen's Union No. 11, and in 1928 was a delegate to the International Pressmen's convention at Pressmen's Home, Tennessee.

The conversation quoted above has occurred in many newspaper plants in recent months. Not necessarily in those exact words---but the thought expressed is always the same, i.e., that Vulcan Vulcolastic Rollers SAVE MONEY.

Vulcolastic Rollers contain no rubber. Hence they are not affected by ink or oil and are free from swelling. That in turn means that these rollers need very little regrinding. Even after months of service, a mere polishing operation is all the regrinding that is needed to re-condition a Vulcolastic Roller.

Vulcolastic Rollers are literally only half as hard as rubber rollers, with a test reading of 20 as compared with 40 for rubber. For this reason, Vulcolastic Rollers are easier to set, and the setting is lighter. Hence . . . better printing, elimination of roller jumps, and less wear. Incidentally, in case of fire, Vulcolastic Rollers will not support combustion.

Write for particulars and recommendations

VULCAN PROOFING COMPANY
First Avenue and Fifty-Eighth St., Brooklyn, New York
Sales Representatives in All Principal Cities

VULCAN
VULCOLASTIC ROLLERS

CAM WIPERS

for Line-Composing Machines

By J. M. SEDBERRY*

*Machinist, Beaumont (Texas) *Enterprise* and *Journal*.

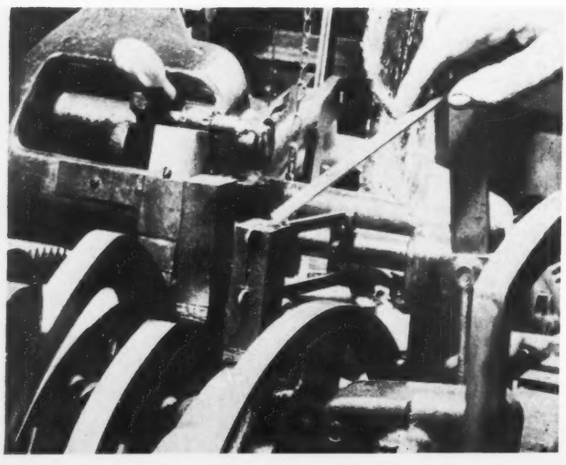
ONE of the important items in line-composing machine maintenance is keeping the main cams clean and free from the dust and grit which settles upon the working surfaces. Usually, where oiling is performed at regular intervals, some of the lubricating oil flows from the cam roller bearings to the cams. The mixture of oil, grit and dirt is an abrasive compound. Eventually, this mixture will cut down the cam surfaces and will destroy the precisely timed machine operations. In many plants, of course, time is available in which to clean the cams by hand with a kerosene-soaked wiping cloth.

So many machinists do not realize that many eccentric mechanical troubles would never occur if the first principle of machine maintenance were to be rigorously observed. Other machinists are powerless to help matters because sufficient help is not available to keep the machines clean.

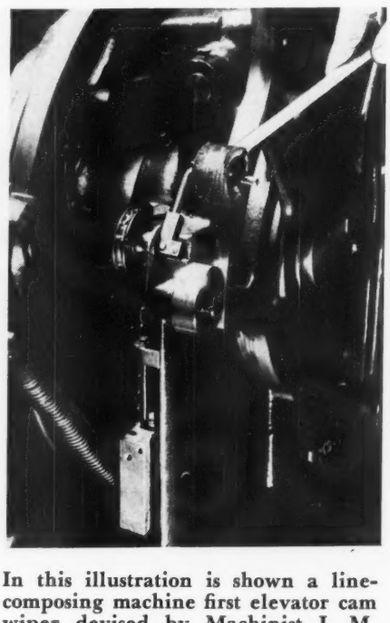
Naturally, all of us are interested in devising ways and means for eliminating drudgery, or to provide automatic means for doing the jobs which are not provided for in the payroll. In our plant, the writer has given considerable thought to a means for automatically wiping the main cam surfaces. The main cam wipers shown in the illustrations were developed here in the *Enterprise* and *Journal* composing room. While in our plant these wipers are attached to Linotypes, they could be fitted to any model of Intertype, depending upon the ingenuity of the plant machinist*.

*Intertypes have been supplied with pot and pump cam wipers for some time. Contact with cam is through spring pressure.

In this illustration are shown several main cam wipers devised by Machinist J. M. Sedberry of the Beaumont (Texas) Enterprise and Journal. The wiper body (shown hand pointing with rod) is filled partially with type metal. Wipers for the various cams all contact the cams under pressure exerted by the type metal. Construction of the wiper tongs or levers is shown in another illustration.



I have installed these wipers on new machines only, as I see no advantage in fitting them to old machines having badly worn cams. After testing them for nearly two years in a double-shift plant, it has been our experience that the wipers keep the cam and cam roll clean and bright and prevent the wear which is caused by dust and dirt being ground into the cam.



In this illustration is shown a line-composing machine first elevator cam wiper devised by Machinist J. M. Sedberry of the Beaumont (Texas) Enterprise and Journal. The wiper is held in contact with the cam by the weight and chain connection. The wiper felts shown here do not revolve with the cam but when they are worn down, they are rotated partially to furnish a fresh wiping surface.

The illustrations do not show a complete set of wipers for all of the cams, but will serve to illustrate the utility of the wipers themselves.

The wipers as discussed in this article are weight-operated. No springs are used.

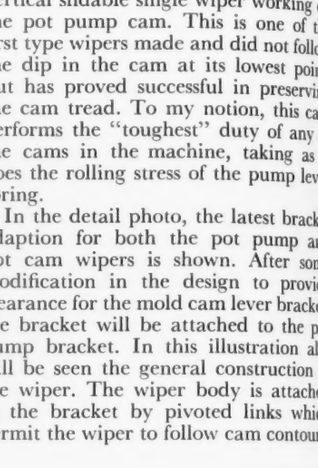
The first elevator cam wiper is constructed of felt disks held between two metal disks. The felts do not revolve. When the portion contacting the cam is worn down, a screw clamping it on the supporting arm can be turned to bring a new surface in contact with the cam. A 10-32 machine screw hole is drilled in the first elevator cam lever to hold the rod upon which the weight rides. Construction of the wiper will be apparent upon inspecting the illustration.

The wiper bodies for the pot and pump cams are constructed of steel, 1¼ in. square, by 3 in long. A 2⅝ in. section of the upper portion of the wiper shell is filled with type metal, poured in while melted, leaving about ⅝ in. section in which to pack the wiper felt. A hole is drilled through the center of the wiper body for occasional oiling. The felts will last for several months with occasional cleaning and can be replaced quickly and easily.

The justification cam wipers (one of which is shown in the illustration) are held in the outboard bracket of the pot pump lever. One drilled spot hole is required for the bracket screw. Body is 1 in. by 1⅛ in. square.

In one of the illustrations the reader will observe a fixed bracket with a vertical slidable single wiper working on the pot pump cam. This is one of the first type wipers made and did not follow the dip in the cam at its lowest point, but has proved successful in preserving the cam tread. To my notion, this cam performs the "toughest" duty of any of the cams in the machine, taking as it does the rolling stress of the pump lever spring.

In the detail photo, the latest bracket adaption for both the pot pump and pot cam wipers is shown. After some modification in the design to provide clearance for the mold cam lever bracket, the bracket will be attached to the pot pump bracket. In this illustration also will be seen the general construction of the wiper. The wiper body is attached to the bracket by pivoted links which permit the wiper to follow cam contours.



Mr. Sedberry's latest design for the pot pump and pot cam wipers. The wiper bracket is held in place on the outboard pot pump lever bracket by two ¼ x 24 machine screws. The lever links are made from ⅜ in. by ⅝ in. cold rolled steel, approx. 3¼ in. long. Eye brackets for the links are welded to the wiper bodies. Type metal in the upper section of the wiper body furnishes weight to hold wiper felts in contact with the cam tread.

Materials Handling Catalog

Lewis-Shepard Sales Corporation has published the Silver Anniversary Edition (Catalog No. 21). Described and pictured are Lift Trucks, Floor Trucks, Portable Elevators, Cranes, Storage Racks, Skid Platforms, Equipment for Specific Purposes, and new machines for use in materials handling.

Keeping in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • APRIL, 1940

WHAT'S NEW IN NOVELTY SHADES AND COLORS

One of the most popular "Keeping in Touch" items we ever ran told about IPI's sensational color, as reported in "The New Yorker," "Expectant Mother Green." Later, we were able to produce a "Fun-in-Bed Red." As you may recall, both of these unusual names were explained by the fact that the colors were made specially for publications called, respectively, "Expectant Mother" and "Fun-in-Bed."

Now we are pleased to announce the latest addition to this list of "specialties." One of our Baltimore representatives reports the recent sale of "One Night Blue." What this is, or why this is, we weren't able to find out at press time. However, it does seem a worthy and logical successor to our previous color oddities. When you get that "One Night Blue" feeling, let us know.

A recent survey indicates that 81 per cent of the college students on 33 campuses believe that advertising performs a useful service. An even higher percentage could be found, no doubt, if the survey were extended to include newspaper and magazine publishers.

"CONFUCIUS SAY..." HERE'S THE LATEST

If there is anything left now that Confucius *didn't* say we want to know what it is and why he neglected it. But that's not what we wanted to tell you. This is really about Chinese money—A.D. 1940, After Confucius 2500. We just saw a series of crisp bank notes issued by the Republic of China in denominations running from one cent up to a dollar. The one-cent bills are really very nice looking; worth a penny just from an esthetic standpoint, not to mention their cash exchange value.

The bills were printed in three different countries: China, the United States, and Great Britain. There is one common denominator for the whole group, however: all the notes are engraved or lithographed, with IPI inks. Which proves, as Confucius say (stop us if you've heard this): "Man who use good ink make lots of money." Lots of Chinese money, anyway.

Science Uses a Stop Watch

Perhaps the most familiar use for stop watches is clocking the pace of runners at a track meet. This stop watch has never seen a hundred-yard dash; it has dedicated its life to science, so to speak. Here, it is being used to time the rate of flow of printing ink vehicles. The instrument shown in the background is a viscosimeter adapted for the use of technicians in The Research Laboratories of IPI's parent company, Interchemical Corporation.

Checking Viscosity

Viscosity (or rate of flow) is so important a characteristic of printing inks that it must be checked with the utmost precision. In The Research Laboratories, where new formulations are constantly being evolved, only the most careful testing methods can be used. This very sensitive viscosimeter will make sure that the Laboratory's viscosity readings will be accurate to the last decimal point.

Inkmaking used to be a craft. It still is, to a certain extent; but, more than a craft, it is becoming a science. IPI's fundamental laboratory studies are helping to make it one.

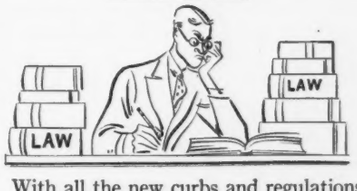
Everyday in Every Way

Not long ago, a printer said to one of our representatives, "Bill, I have your Everyday inks running on eight of my presses today, and for all kinds of jobs." Printers are finding that IPI's handsomely-packaged Everyday line has a great many uses. Have you tried Everyday inks for automatic presswork?

Package Award Winners Must Read Our Ads

In the 1940 All-America and Wolf Award packaging competitions, 23 awards went to packages printed with IPI inks. This is by far the largest total using the inks of any one manufacturer.

There must be a reason! Either these leading packagers read our advertising, or they listen to our salesman. Or perhaps they have discovered, from experience, that IPI developments (like new pigmented aniline inks, Vaporin, Holdfast, Lithox and other new inks for packagers) offer them production and sales advantages that can't be overlooked.



With all the new curbs and regulations on advertising copy, soon the best-qualified advertising writers will be lawyers.

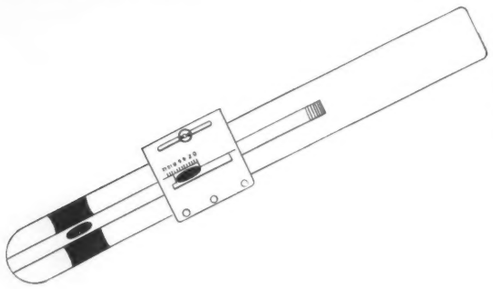
Advertisement

Printing Equipment and Supplies

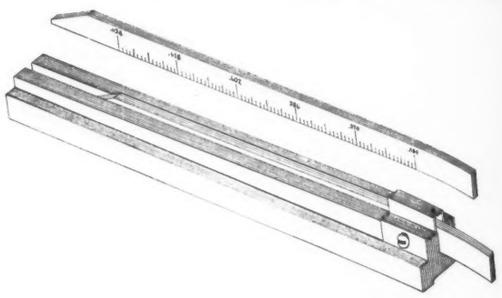
Roller-Set and Impression Gauges

Auburn Taylor, well known newspaper pressroom executive, has devised two gauges for use by pressmen. The first of these (described some time ago in *Printing Equipment Engineer*) is a Roller-setting Gauge for use on rotary and cylinder presses, but it is stated that it cannot be used on the under roller of a decker type press. The gauge is made of thin stainless steel leaves with a brass slide mounted so as to be slidably movable over the slot in the top leaf. To determine the relationship of the roller with the plate, the tool is used in the same way as when a mark is taken on paper. After the mark has been taken on the gauge, the gauge is removed and the amount of roller contact is then measured by moving the slide over the capsule-shaped mark appearing on the bottom leaf and within the slot of the top leaf. In this way accurate gauging by means of the graduations in the slide opening may be obtained without destroying the mark or smearing it. The length of the mark to be gauged (which determines the contact of the roller) is in turn determined by adjusting the plate on the slide after loosening the adjusting nut.

The second gauge mentioned in the opening sentence, is called the Taylor Impression Gauge for determining the parallelism and adjustment of the plate with the blanket cylinder on rotary presses. The gauge consists of a steel body containing a slot suitably tapered to receive a graduated slide. The slide is graduated from 0.354 in. to 0.634 in. thousandths of an inch.



Left: Diagrammatic drawing showing Taylor Roller Setting Gauge.



Right, above: Taylor Impression Cylinder gauge for rotary and cylinder presses

To illustrate how the gauge is used, it is assumed that a newspaper stereo plate 0.4375 in. is used; the blanket used is 0.145 in. thick; these two figures total 0.5825. Now, if 0.0125 in. indentation is desired, the gauge would indicate 0.5700 in. In use, the gauge is inserted between the cylinders and the slide is pushed inwardly against one of the cylinders. The position at which the slide is stopped automatically indicates the cylinder relationship. This method of securing cylinder relationship is stated to be the quickest. It is assumed, of course, that cylinder bearings are in ideal condition, otherwise the amount of play must necessarily be allowed for in the test.

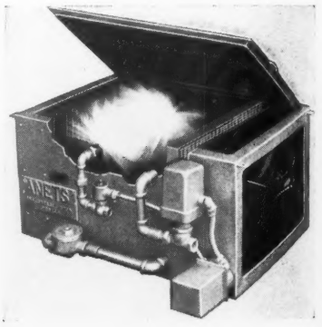
Self-Contained Air Conditioner

Certain difficulties encountered through unfavorable reactions of paper stock to seasonal conditions and weather variations, are said to be overcome through the installation of the "Anets" Midget Room Air Conditioner.

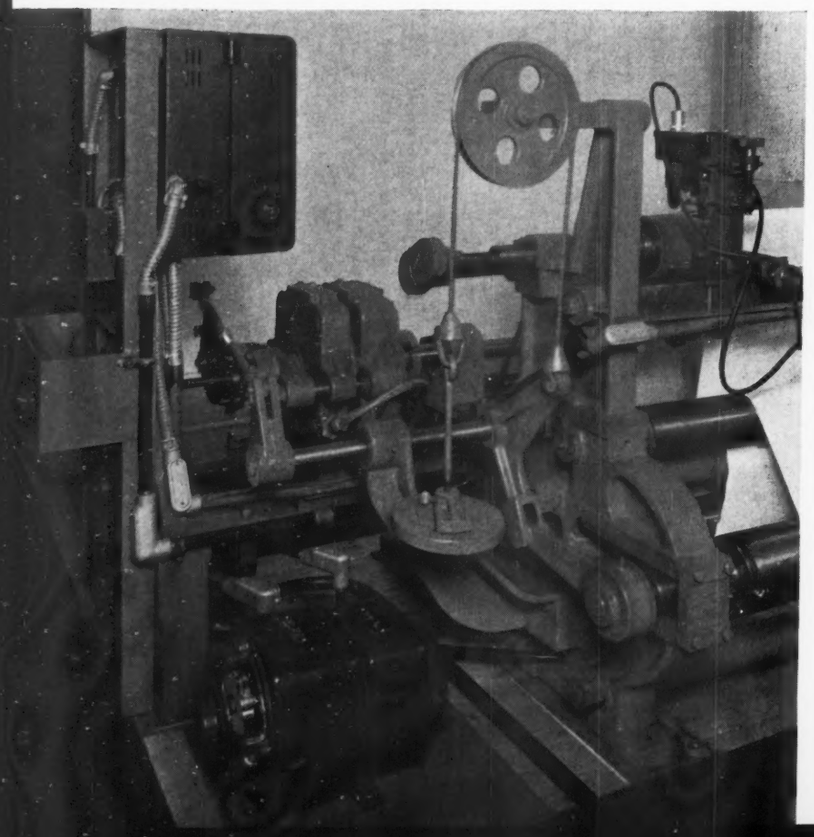
According to the manufacturer, installation of the conditioner will enable printers or offset lithographers to maintain any desired degree of temperature or relative humidity within a given space, thereby preparing paper stock for press-work; or, as the case may require, the unit sets up a suitable condition for the better drying of inks while presses are in operation, or during the ink-drying stage after impressions have been made.

The unit is described as being automatic in operation. Installation is accomplished either by placing the midget unit on wall brackets, or by overhead suspension. Outside dimensions measure 34 in. long by 25 in. wide by 15 in. high. No air ducts are necessary, because the unit constantly reconditions the room air, maintains the required temperature, and washes the room air to accomplish the "best condition" for paper storage, presswork or drying of inks on the sheet.

Unit is controlled at the wall by a combination thermometer and humidity gauge, which automatically maintains



View of "Anets" Midget Room Air Conditioner. Manufacturer states humidities as high as 75% can be maintained in 1500 cu. ft. rooms—lower humidities in larger rooms.



Photoelectric Control "Straightens Out" Paper Roll. Should the paper coming off the roll on this Cameron Machine Company Winder and Slitter Machine be skewed or out of line, a G-E photoelectric side-register control system will guide it back to the proper track. Technically speaking, an Amplidyne generator controlled by a photoelectric amplifier supplies power to a d-c motor which, in turn, shifts the roll of paper to maintain registration. Generator shown at lower left. Scanning device at upper right.

HARRIS . . .

ENGINEERED TO GIVE THE RESULT YOU SHOULD *ALWAYS* DELIVER

● Offset, to be acceptable—and therefore profitable—must be more than just ink on paper. It must provide a reproduction of dominant ideas in such quality as adequately EXPRESS those ideas—the skillful blending of colors or the faultless expression of black and white.

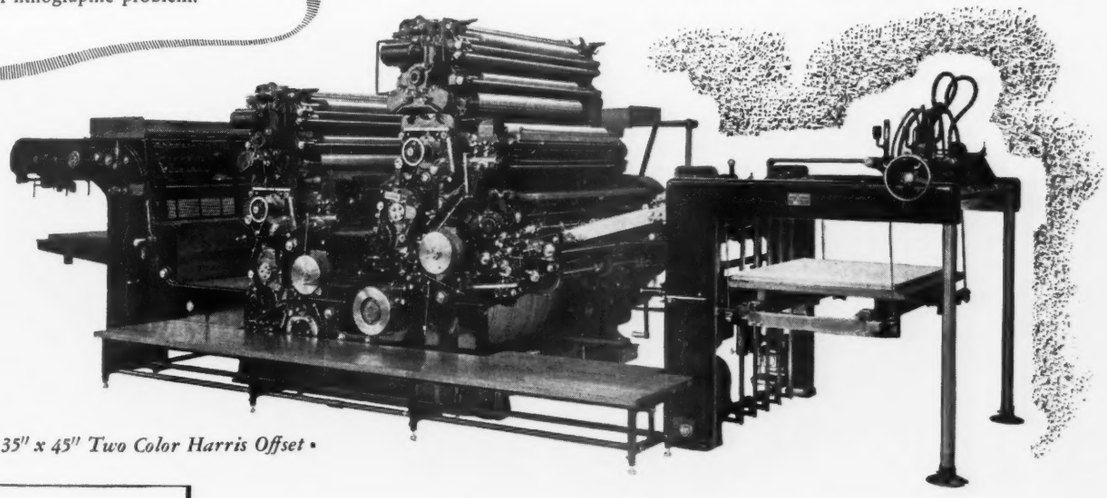
Harris Presses are engineered to provide these results that keep customers. Harris leadership has been well earned over the years...and now Harris research gives to the industry a new value — a chemical service to plate making.

In choosing Harris, you buy a background—a plus value—that was created by press equipment—that has consistently given the results you must have for profit—an *invisible value* that only experience can create.

A complete range of sizes offer adequate facilities for every Offset need.

★ HARRIS LITHO-CHEMICALS

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problem.



★*LST • 35" x 45" Two Color Harris Offset •*

Harris Service
It's Nation wide—is as famous in the Offset field as Harris Presses themselves.
●

HARRIS • SEYBOLD • POTTER • COMPANY

General Offices: 4510 East 71st Street, Cleveland, Ohio; *Harris Sales Offices:* New York, 330 West 42nd Street; Chicago, 343 South Dearborn Street; Dayton, 819 Washington Street; Atlanta (Harris-Seybold Sales Corp.), 120 Spring Street, N. W.; San Francisco, 420 Market Street. *Factories:* Cleveland, Dayton.

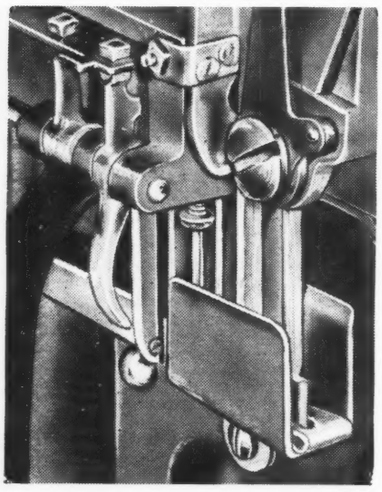
any given degree of temperature or humidity condition after manually set for both.

The air delivery of the unit is approx. 350 c.f.m. Humidities as high as 75% can be maintained in rooms of 1500 cu.ft. Lower humidities can be maintained in larger rooms. Manufacturer states that where only a portion of the room requires humidity, the unit will be desirable as it is of the re-circulated type Air is washed by passing through the spray system, operated by the usual water pressure of 20 lbs. or more. The automatic humidity control operates the spray system in relation to the amount of humidity desired. Operating range of the unit is 40 to 80%.

Circular available by writing to Anetsberger Brothers direct or in care of *Printing Equipment Engineer*.

Spaceband Buffer Finger

A sheathed spaceband buffer finger with spring cushion for use on Intertype and Linotype line-casting machines has been developed by Economy Buffer Finger Company. That part of the conventional finger where the shanks of the spaceband wedges strike is supplied with a sheath arrangement as shown in the illustration which guides the wedges into an aligned position so the slot in the



View of Economy Spaceband Buffer Finger showing sheath which causes spacebands to come to rest with the slot in the spaceband wedge straddling the finger equally on either side of the slot.

bottom section of the wedge will straddle the finger without striking either side. In this way, rapid burring of the top of the finger is prevented, which in turn eliminates filing off the burrs or replacing the finger. A further aid in removing metallic shock is a flat spring placed within the sheath upon which the spacebands come to rest when settling in the assembling elevator. Considering that between 8000 and 10000 spacebands drop upon the buffer finger in the course of a day's work, manufacturers state that reduction of the burring effect of the spacebands upon the buffer finger is radically reduced by means of the finger which is provided with a sheath and impact spring.

Individualized Bearers

F. A. Trittipo of Printers' Supply Service, has announced an improved individualized bearer for "framing" composition when taking reproduction proofs and for forms which are to be sent to the electrotype foundry. The bearers developed by Printers' Supply Service are

-FAITHORN-

Here are shown two specimens of the Individualized Bearers announced by Printers Supply Service. The bearers are machine-cast on 24 pt. body. The dotted line indicates the shoulder. User's letter pattern is cast intaglio (according to length of name) from 14 to 19 pica intervals, counting center to center of the design.

-HAYES-LOCHNER-

cast of proper height and are furnished with the name (intaglio) of the typographer or composing room furnishing the composition for reproduction. Announcement received states "These bearers are made from a harder metal and have proved to be a more perfect locking material than the soft metal or wood bearers that have been used in the past." The bearers are also available without name if desired.

The bearers are made in 24 pt. body, 24 in. continuous length and there are approximately 116 ft. to 100 lbs.

Streamlined Molding Press

A new streamlined Lake Erie Directomat Hydraulic Matrix Molding Press has been announced by the Lake Erie Stereotype Equipment Corporation, division of the Lake Erie Engineering Corporation.

In commenting upon these new units, the company points out that they have been "streamlined in speed, ease of operation, and maintenance, as well as appearance." It is further added that "in spite of nearly twenty specific changes and improvements, these new Directomats continue to incorporate the outstanding features of the earlier models."

Among the improvements listed are the elimination of all external piping, convenient grouping of gauges and controls, addition of work light immediately below instrument panel, and wider distribution of weight. A sump tank has been provided to completely eliminate any possibility of oil leakage, and all electrical controls are housed in a separate accessible, dust-proof cabinet, built into the press. Overall height has also been reduced.

This new model Directomat is available in all 800 types, including those used for daily newspaper production, syndicate work, color work, and also the company's special high-speed molding and drying type for large production of plastic and wet mats.

Complete information and specifications may be had by writing the Lake Erie Stereotype Equipment Corporation direct or in care of *Printing Equipment Engineer*.

Wood Ad Mat

The Wood Ad Mat, states Wood Flong Corporation, is specially manufactured to meet the exacting requirements of advertisers and advertising agencies. It is also designed to fill the demands of job shops employing dry mats for publicity releases.

"Considerable time," states manufacturer, "was devoted to a careful study of the type of mat which could best meet the specifications of advertiser, agency and job shop alike before any experimental work was undertaken from a production standpoint. It was obvious that such a dry may would have to be soft to permit the molding of many mats from the same form without damage to

(*Continued on Page 42*)

View of new model streamlined Lake Erie Directomat. Maker states nearly twenty changes and improvements have been made. A sump tank eliminates oil leakage.

HUBER VELO COLD SET INK

AND PRINTING PROCESS

(PATENTS PENDING)

No washups with Velo Ink — except to change color

So instantaneously does Velo Cold Set Ink solidify that it is lifted bodily from the printing plates, leaving them clean after each impression. This complete transfer plus the fact that the ink cannot thicken, gum, or harden on the heated press, makes washups unnecessary except to change color.

Velo Cold Set Ink at ordinary temperatures is *naturally the solid* which other inks approach as they dry. By the application of low-temperature heat (approximately 200° F.) to the press—ink fountain, metal rollers, and plate cylinder—the solid ink is made fluid...only to solidify again instantly upon touching the cool (room temperature) paper.

Printing speeds are limited only by the top speed at which the web can be run, and no offset webs are needed... there is no penetration of ink into even the most absorbent papers, and fine-screen halftones can be printed on rough, absorbent stocks... the lead of the web through the press is not changed, and the paper is not subject to stretching, shrinkage, or strain ... fire and health hazards are eliminated.

Specimens of Velo Cold Set rotary press printing will be mailed at your request. Write to J. M. Huber, Inc., 460 West 34th St., New York. Branch offices in Chicago, St. Louis, Boston. Dealers in principal cities of the U. S. A. and foreign countries.

SINCE HUBER INKS 1780

Iowa Conference Program Taking Shape

EXPERTS on various phases of newspaper mechanical operation will be among the speakers scheduled to address sessions of the fourteenth annual Iowa Daily Newspaper Mechanical Conference to be held Sunday, Monday and Tuesday, May 19, 20 and 21 at Sioux City, Iowa. The complete program has been arranged by Guy J. Chappell of the Iowa City *Press-Citizen* who is president of the conference this year.

Following an informal opening day of registration, tour of the city and golf, a "get-together" party will be held Sunday evening at Hotel Martin, the headquarters. The convention will be called to order at 10 a.m. Monday by Mr. Chappell. John C. Kelly, managing editor of the Sioux City *Tribune*, will give the address of welcome and Mayor David F. Loepp of Sioux City will extend greetings. These will be followed by an address by Mac Sinclair, editor of *Printing Equipment Engineer*, who will discuss, "What's New in the Daily Newspaper Printing Field."

John W. Carey, managing editor of the Sioux City *Journal*, will serve as toastmaster for a Monday luncheon at which the two Sioux City newspapers will be hosts. Following the luncheon, the convention will adjourn to meet in three group sessions.

Charles H. ("Tod") Bleuer, composing room superintendent of the Davenport (Ia.) *Democrat*, will be chairman of the composing room session at which talks and discussions on various new features of composing machine equipment will be discussed. Those taking part in the discussion include C. E. Murray and William H. Timmers of Linograph Corporation, Cliff C. Holy of Mergenthaler Linotype Co., Mr. Severin of Intertype Corporation, Clay A. Wellman and Jack Moore of Ludlow Typograph Co., and George H. Hanson of Lanston Monotype Machine Co.

Earl Caldwell, stereotype superintendent of the *Argus-Leader*, Sioux Falls, S. D., will be chairman of the press and stereotype session. A talk on "Ink" will be presented by Guy Burns, technician for the George H. Morrill Co. Problems of the daily newspaper engraving department will be discussed at the engraving session which will be presided over by A. P. Ashton, engraving superintendent of the Sioux City *Journal*. Louis A. Steinmiller of the National Steel & Copper Plate Co. will speak.

The annual convention dinner for members and wives, given through the courtesy of representatives of manufacturer and supply houses, will be held at 7 o'clock Monday evening in Hotel Martin. Entertainment and dancing will comprise the evening's program.

Meeting again in general session at 9:30 a. m. Tuesday, the convention delegates will hear an address by E. J. Kahler, general manager of the Daily *Argus-Leader* of Sioux Falls, S. D., and will hold an open discussion on "What Is New in Equipments and Methods" in which the chairman of the group meetings will lead the roundtable.

The Tuesday afternoon session, starting at 1:30 p. m., will include reports of committees, selection of the next conference city and election of officers to be followed by adjournment.

The Iowa conference is composed of mechanical executives of the composing, machinists in charge of composing machines, press, stereotype and photo-engraving departments of newspapers in the middlewest. Last year delegates from 15 midwest states attended the conference.

Officers of the conference are: Guy J. Chappell, Iowa City *Press-Citizen*, president; Charles H. Bleuer, Davenport *Domocrat*, vice president; and Paul Kamler, Clinton (Ia.) *Herald*, secretary-treasurer.

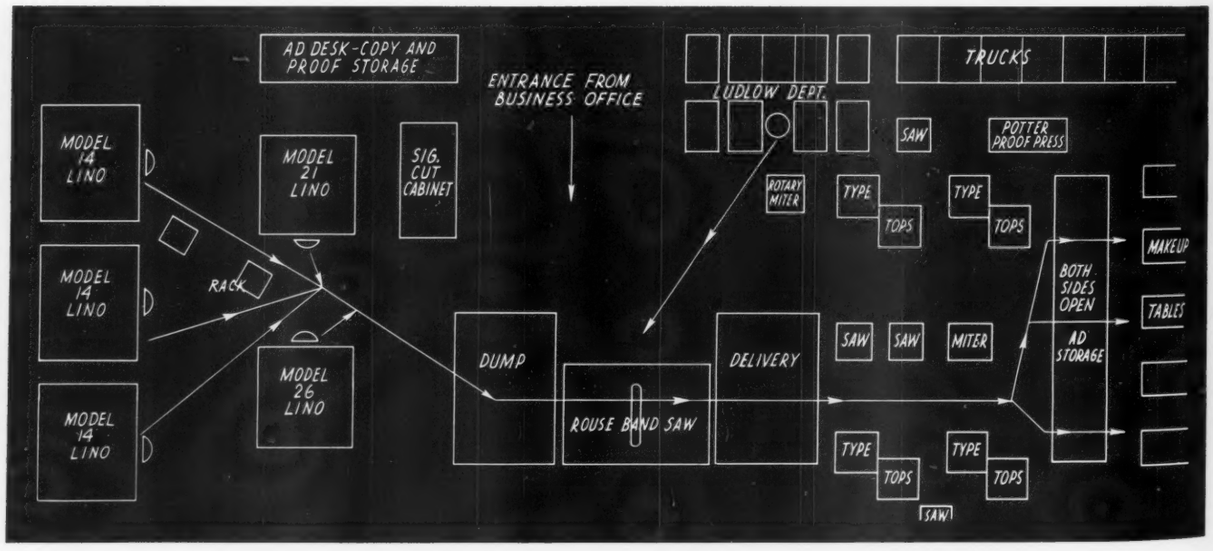
Richards Catalog

In die cut shape, J. A. Richards Company has published a new 48 page catalog, illustrating and describing the company's line of die-making equipment; die-making, stereotype, composing room and photo-engraver's line of saw-trimmers; routers, planers and other accessories.

Accompanying the catalog is a cleverly executed sheet demonstrating what can be done with Richards equipment in the way of holes, fancy edges, inside and outside punched lettering and special punchings for stock cards, programs, place and dance folders, menus, envelope inserts, and other types of printing. Copies gladly sent to production and mechanical executives. Address J. A. Richards Company direct, or in care of *Printing Equipment Engineer*.

Straight-line Production in Newspaper Ad Alley

An excellent example of newspaper composing room straight-line production is employed by Composing Room Superintendent S. B. Andrews of the Tampa (Fla.) Tribune in the Tribune's ad alley. While production generally in the Tribune plant flows straight-linewise, the ad alley equipment arrangement only is presented in this diagram. So-called "straight-line production" may flow in a zig-zag or even in a circular direction and yet stay within a theoretical straight-line course so long as it does not back-track or overlap the previous progressive travel to its ultimate completion. When straight-line production takes a spur or side motion, such as might occur in the proofing operation, the straight-line principle is not destroyed. Quite often, the limitations of floor areas create equipment placement problems. Each printing plant, therefore, is a problem in itself.



THIS ADVERTISEMENT APPEARS IN THE SATURDAY EVENING POST, MARCH 23, NEWSWEEK, APRIL 1 AND TIME, APRIL 22

Tapered Roller
TIMKEN BEARING
EQUIPPED

On virtually all principal railroad systems, you'll find luxurious new streamliners to provide you with comfort, pleasure, and to save your time. Most of these new trains and locomotives are Timken Bearing Equipped. ¶ Railroad executives know that Timken Bearings make possible vastly improved passenger and freight service. ¶ What particularly pleases railroad men is the fact that Timkens cut down waste—cut out hot-boxes—cut out delays—increase the usefulness of locomotives—cut operating costs in a most amazing manner. That means Miles of Smiles for the operator as well as the traveler!

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

NOTICE

Look for the trade-mark TIMKEN on every bearing, whether buying new equipment, or replacing a Timken Bearing in your automobile or truck, industrial or farm machinery. That trade-mark is your assurance of quality.

TIMKEN
TAPERED ROLLER BEARINGS

Copyright 1940 by The Timken Roller Bearing Company

COLOR GRAVURE

(*Continued from Page 14*)

neglected. Prior to the installation of the Dultgen Process a great deal of dependence was laid on the mushy dot of gravure printing to obliterate any markings of pattern or moire that might occur from regularly overlapping screen dots. As a result, some of the rotogravure showed this moire or pattern defect.

The introduction of the Dultgen Process eliminated all of this. Recognized standard screen angles are used with their angle of 90 deg. for the yellow; 45 deg. for the black, 75 deg. for the red, and 105 deg. for the blue. Strict adherence to these angles eliminates any chances of pattern despite cylinder movement that may be introduced by the speed of the press.

In conventional gravure, whether it be monotone or multi-color, two shots are necessary on the carbon tissue to produce the screen positive. The first shot on the carbon tissue is that of the screen to produce the screen lines; while the second one is that of the continuous tone negative to produce the subject. Figure 1 represents such a procedure.

In the Dultgen Process the positive is already screened, showing the image to be reproduced in varying sized dots conforming to the tones of the subject. A specially prepared continuous tone positive is registered with the halftone positive. Both positives are then printed on the carbon tissue in register.

In the exposure, the carbon tissue, being sensitive to light, is hardened in those areas where the light causes a chemical reaction. The portions under the dense parts of the positive remain soft or soluble, and consequently during development after the entire carbon tissue is attached to the cylinder, these softened or soluble portions develop away, leaving the copper exposed beneath them. In those portions where the carbon tissue is protected in varying degrees by lighter or darker shades, the coating is hardened to that degree in which it is reacted upon by the action of light. Therefore, it offers just that much resistance to the developing and etching actions, and consequently accounts for the difference in depths of the cut on the copper surface of the cylinder. Fig. 2 and Fig. 3 show the etched dots of both conventional and halftone gravure.

Arthur W. Dultgen, Rotogravure Superintendent, New York Daily News

The conventional type of gravure has its faults in multi-color work where successive prints follow each other to build up a picture. Due to these faults the picture may become flat and muddy looking. There is a loss of highlights, and the character of the whole flattens out. Of course, to get away from this effect, recourse sometimes is taken to a contrasty print, but while this does aid some, it still leaves much to be desired in snap and the elimination of that muddy look.

To improve the quality of rotogravure, it was Mr. Dultgen's idea to improve the screen. There were certain restrictions, however, imposed in this direction by the method itself. Because of the method of removing the surplus ink from the cylinder surface each dot has to have a wall around it. The doctor blade has to have a bridge between dots to retain the character of the dot. Otherwise all the ink will be swept out of an exposed area. Mr. Dultgen's screen still permits him to make use of the variable depth of etch, but the process also enables him to retain a pin point dot and the bridges.

In this process, the color separation negatives made in a 3-in-1-shot camera are used for feature spreads. All color separations made for color advertising appearing in the *News* are made with a copying camera. The procedure is the same as that used in other color printing processes. Color correction takes the usual form on these separations, or on the succeeding steps.

The results by this process with its precision workmanship are outstanding. This is especially recognized when the finished result is compared with the washoff relief original. Snap has been retained in the picture. Color effect is as nearly facsimile as humanly possible in four colors.

Food for Thought

By WM. J. KNOLL*

DURING these times of streamlining and the high cost of production it is about time that we relax for a moment and think.

As we all know, a newspaper plant is a highly productive plant where all the efforts and labor of today are worthless tomorrow. It is, therefore, important that we cut costs wherever we can, and look into the new methods used in saving time and the putting of more appeal into advertising which helps to increase the revenue of a newspaper.

It is a certainty that newspaper advertising will always be the most popular medium for bringing the seller's message to the buyer, but it is essential to have the ads attractive so as to catch the eye of the reader. It is vital, however, to keep the page cost down so as to eliminate any other method of printing a newspaper.

It is the problem of the publisher, the editor and the business manager to see that their newspaper is interesting to the reader and highly saleable to the advertiser. It is the problem of the suppliers to furnish the finest equipment for producing a better newspaper at the lowest possible page cost.

**President, H. B. Rouse & Co., Chicago, Ill.*

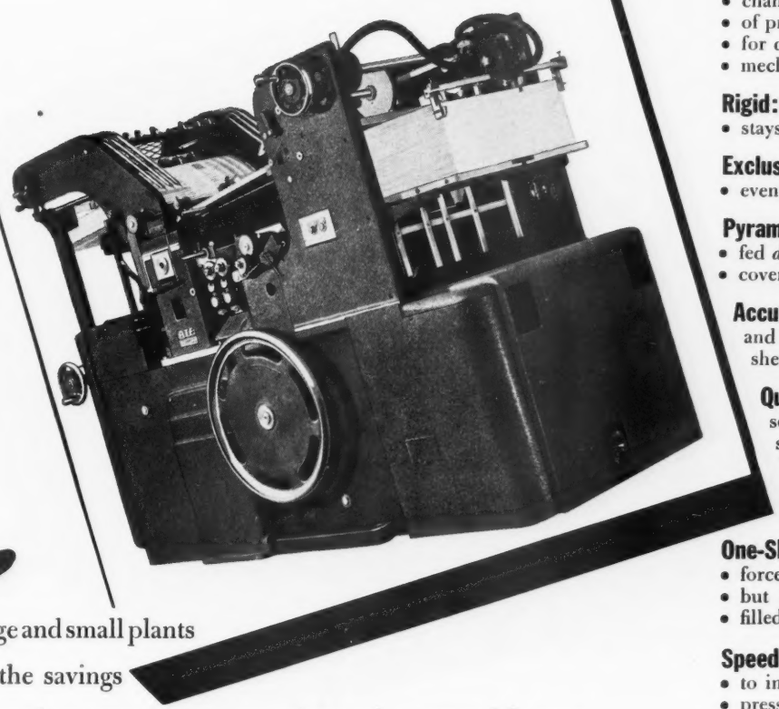
Named President

D. W. Frackelton, formerly Vice President and Treasurer of the Chandler & Price Company, Cleveland, has been named President and Treasurer of the company. Mr. Frackelton succeeds his brother, J. W. Frackelton, who passed away last February. J. E. Wilkison is Secretary of the company. Walter P. Moak is Assistant Treasurer.

Softball Challenge

Says A. H. Miller of the Huber Softball Team: "It's a sure sign of spring when the Huber Softball Team again challenges other teams in the Graphic Arts industry. We have built up a great deal of enthusiasm during spring training but our scouts advise there is little activity in other camps." Mr. Miller hopes the softball enthusiasm of last year will be renewed again since the Huber team is anxious to take on all comers and the team's schedule is being made up. All those interested may get in touch with Mr. Miller via J. M. Huber's Sales Dept., 460 West 34th St., New York, N. Y.

Can you match these CLIPPER Advantages on your present Equipment?



Complete Accessibility: Swing-away delivery, speedy lockup, and quick changes. Form planed down on bed of press. Plenty of room at cylinder for quick makeready. Entire inking mechanism exposed for quick washup.

Rigid: Extra weight, 4620 lbs.—Job stays madeready. Longer press life.

Exclusive Cylinder Toggle: Powerful, even impression.

Pyramid Inking: Well-worked-up ink fed *directly* to form rollers, adequate coverage at *all* speeds.

Accurate Register: Micrometer side and drop guides, easy control of sheets.

Quick-set Stream Feeder: Blast set in a few seconds. Feeds onion-skin to 4-ply cardboard stock. The overlapped sheets arrive at grippers at one-fourth cylinder speed. Complete visibility.

One-Shot Oiling: One plunge of lever forces oil to all main bearings—all but 3 manual oiling holes can be filled while press is running.

Speed Changes: Simple hand-wheel to increase or decrease speed while press is running.

Owners of large and small plants are enjoying the savings these Clipper advantages give them. Since thousands of superintendents and pressmen in the United States specified* and okayed these features... they're practical ideas that help reduce the chores around a press and simplify accurate and speedy work. The fast get-away in the morning and on every job, easy changes and quick makeready with the Kelly Clipper, cut your shut-down time and lessen spoilage. A top speed of 5000 an hour on the Clipper, one-shot automatic oiling, quick-set feeder and a powerful even impression will give you more salable sheets.

Refigure your last four or five jobs as if you had a Clipper and you will realize the savings possible with this modern press. Ask your ATF Salesman for the new Clipper press sheet, or write

*ATF Ideal Press Contest

Other Famous **ATF PRESSES**
No. 2 KELLY
No. 1 KELLY
17x22 KELLY
LITTLE GIANT
ATF-Webendorfer Sheet and Web Fed OFFSET PRESSES

American Type Founders

200 ELMORA AVENUE, ELIZABETH, NEW JERSEY • Branches in Principal Cities

Types used: Grayda, Franklin Gothics and Bulmers

SIZE SELECTION SIMPLIFIED*

Use this practical new reference manual, with its convenient charts, tables and diagrams, to

- **save time in planning and estimating jobs,**
- **back up your recommendations to customers,**
- **simplify the planning of gang runs, and**
- **insure against waste and inefficiency on all the folders, booklets and commercial printing you produce.**

$12.75
POSTPAID

Please send remittance with your order to

PRINTING EQUIPMENT ENGINEER
1276 West Third Street **Cleveland, Ohio**

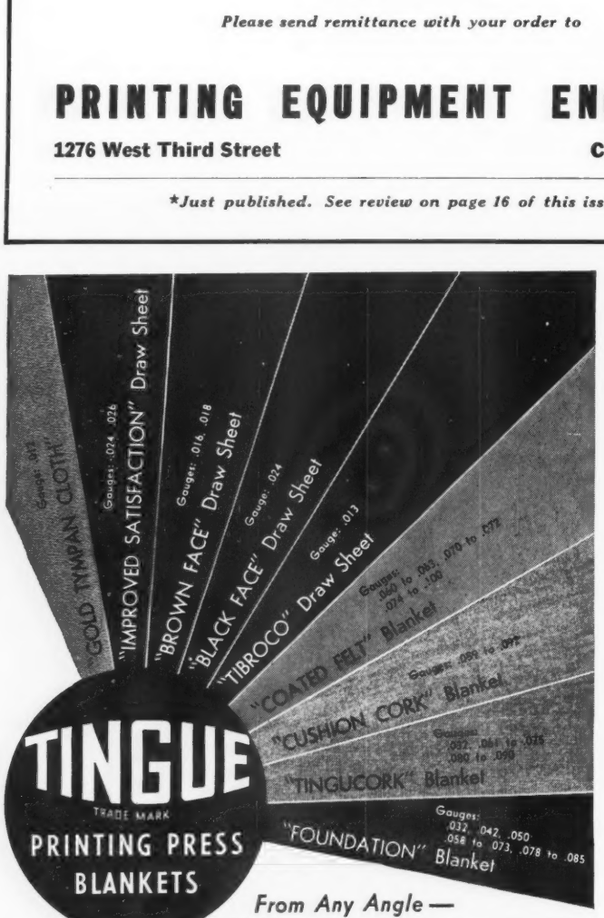
**Just published. See review on page 16 of this issue.*

Akron Union Is To Observe Three Events

ON Sunday, April 28, Akron (O.) Typographical Union will celebrate its 60th anniversary as well as observing the 500th anniversary of the invention of printing and the 300th anniversary of the introduction of printing in this country. Banquet and ceremonies will be held at the Mayflower Hotel, starting at 1 o'clock.

John S. Knight, editor and publisher of the Akron *Beacon-Journal* and president of the Miami (Fla.) *Herald*, has consented, tentatively, to speak. Mayor Lee Schroy and Attorney Joseph Thomas, of Akron, will speak. Other speakers are President Claude M. Baker of the International Typographical Union, Indianapolis; Trustee John Ogg of the Union Printers' Home, Springfield, O.; Director of I.T.U.'s Bureau of Education Floyd C. Parks. LeRoy Church, a member of Akron Typo Union, is scheduled to speak on the *Five Hundredth Anniversary of the Gutenberg Invention*. Mr. Church, who is typographer for the Akron *Beacon-Journal*, is considered an outstanding student of printing.

President Reese J. Highfield of Akron Typo Union, is general chairman of the ceremonies. He is being assisted by a number of committees.



From Any Angle —
TINGUE PRINTING PRESS BLANKETS *— Are Superior*

Stocked in gauges listed above.
Samples and detailed prices upon request.

TINGUE, BROWN & CO.
114-120 East 23rd St, NEW YORK N.Y. — 1227 Wabash Ave, CHICAGO ILL. — 723 East Washington Blvd, LOS ANGELES CAL.

Supplies
for Stereotyping

- PACKING FELT
- CORK MOLDERS
- BOARDS & CREEPERS
- CUTTING TOOLS
- ROUTER BITS & BELTS
- MALLETS & CHISELS

Scorchers
"The Form-O-Scorch"

- For FLAT, CURVED
- or TUBULAR MATS

write for catalog

AMERICAN PUBLISHERS SUPPLY
WEST LYNN, MASSACHUSETTS

PRINTING PATENTS REPORT

(Covering Patents Issued February 27-March 19, 1940)

This patent data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Book Binding:

2,193,534. BOOKBINDING METHOD for books of the type represented by magazines, etc., having several signatures bound in a paper cover. According to the invention, all signatures are secured together by glue, no stitching or stapling being used. Invented by Jesse H. Lounsbury, Plainfield, N. J. Assigned to Rutherford Press, Inc., Rutherford, N. J. Application March 20, 1939. 2 claims.

Composing Equipment:

2,191,713. MAGAZINE AND TABLE FOR TYPE SHEETS or strips, wherein the sheets or strips are held in over-lapping position for ready observation and access. Invented by Louis Grudin, New York, N. Y. Unassigned. Application June 23, 1938. 12 claims.

2,191,844. IMPROVED MAGAZINE FOR TYPOGRAPHICAL COMPOSING MACHINES. This magazine is made lighter by decreasing its length and increasing the number of magazine channels. Invented by Hermann Brandenburg, Berlin-Tempelhof, Germany. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application November 17, 1939. 8 claims.

2,192,220. MOLD CONSTRUCTION FOR LINE CASTING MACHINES with adjustment features for variation, over a wide range, of the point size of type to be cast, and including features whereby the mold head assembly may be used selectively for casting large display type above the sizes ordinarily possible in the use of standard line casting machines. Invented by Clarence E. Brandon, Jr., St. Louis, Mo. Unassigned. Application March 4, 1939. 15 claims.

2,192,407. METHOD AND JIG FOR PERFORMING OPERATIONS ON A TYPE CASTING MOLD. The operations may be grinding, for example, and the construction of the device is such that, rather than disassemble the entire mold, the movable mold parts only are moved to certain positions during the operation. Invented by Frank J. Lemieux, Rumford, R. I. Unassigned. Application May 10, 1938. 3 claims.

2,194,282. AUTOMATIC FEEDER for feeding an ingot or pig to a pot of molten metal. Device has a highly sensitive ingot release actuated by a float suspended on the surface of the molten metal in the pot. Invented by Frank Johannesen, Erie, Pa., and Frank Swenson, Teaneck, N. J. Assigned to Linotype Parts Co., 203 Lafayette St., New York, N. Y. Application December 22, 1938. 6 claims.

Feeding, Folding, Delivery:

2,191,596. SHEET FEEDING DEVICE with simplified construction by means of which a change may be made from fully automatic, hand, or semi-automatic feeding to three-quarter automatic feeding without it being necessary to adjust the feed table. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application April 25, 1938. 5 claims.

2,191,597. SHEET FEEDING DEVICE having an arrangement for regulating the speed of the conveying means of the feed table in conjunction with periodic retardation of the sheet travel toward the end of the feeding operation so as to permit transition from overlapped stream to single feeding. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application May 3, 1938. 4 claims.

2,191,881. MECHANISM FOR VENTILATING AND ACCELERATING the sheet delivery and stacking part of a printing press, so that the speed limitation imposed by the "air-drop" method of delivery of the printed sheets from the press is reduced. Invented by Harry Erikson & George A. Harker, Chicago, Ill. Assigned to Binks Mfg. Co., Carroll & Kedzie Ave., Chicago, Ill. Application March 10, 1939. 12 claims.

2,192,068. AUTOMATIC SHEET FEEDING DEVICE for cylinder printing presses wherein the same structure is used to lay the sheets on, as well as to lay them off. Invented by Artur Buttner, Heidelberg, Germany. Assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany. Application February 4, 1939, In Germany February 7, 1938. 3 claims.

2,192,908. ACCELERATING ROTARY FEEDER for transferring sheets to the impression cylinder of a printing press. Device is claimed to be capable of high speed, more accurate operation, and to make possible the printing of a relatively long sheet on a cylinder of a given diameter. Invented by Charles W. Harrold, University Heights, Ohio, and James R. Wood and Christen Kaddeland, Shelton, Conn. Assigned to Harris-Seybold-Potter Co., 4510 East 71st St., Cleveland, Ohio. Application September 1, 1936. 35 claims.

2,192,916. ROTATING TYPE ACCELERATING SHEET FEEDER particularly adapted for use in connection with stream feeding. The invention employs gearing including only circular segments, which are not subject to inaccuracies in manufacture and assembly. Invented by Christen R. Kaddeland, Shelton, Conn., and Charles W. Harrold, University Heights, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 East 71st St., Cleveland, Ohio. Application March 21, 1938. 40 claims.

2,194,344. SHEET FOLDING AND PLEATING MACHINE for use in making folders such as are used for brief backs, report binders, etc. Invented by Anders J. Wikander and Ivan Lind, Brooklyn, N. Y., and Lacy L. Wisdom, New York, N. Y. Unassigned. Application November 10, 1938. 15 claims.

Miscellaneous:

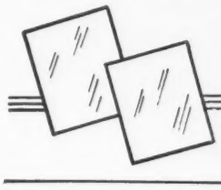
2,191,603. QUICK DRYING PRINTING INK containing jojoba oil as the sole binding agent. Invented by Thomas C. Whitner, Jr., Elizabeth, N. J. Assigned to Ellis Labs., Inc., a corporation of New Jersey. Application December 27, 1937. 4 claims.

2,192,953. PIGMENTED PRINTING INKS and like coating compositions with improved flow and working properties, brought about by incorporating in the composition certain polyhydroxy amines produced by reducing sugars containing at least 5 carbon atoms. Invented by Clifford K. Sloan and Gordon D. Patterson, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application July 22, 1936. 17 claims.

LABORATORY CONTROL ASSURES UNIFORM HIGH QUALITY

Nothing is taken for granted in the production of A-Z Alloy and Zomo Electric Zinc. Samples are cut from sheets from every run of metal. These samples are tested for hardness and given a careful burning-in test. Finally they are put through an etching test in a standard etching machine, duplicating a regular three-bite commercial engraving. Smoothness of etch is then determined by microscopic inspection, with and without the application of dragon's blood. Cast in the electric induction furnace, and carefully checked through every step of production, this final laboratory control gives final assurance of uniform quality, stamina, and smooth, quick etching.

You can now order Zomo Electric Zinc and A-Z Alloy, plain or Backoted from leading metal suppliers in the United States, Canada and England.



ZOMO ELECTRIC ZINC

A-Z ELECTRIC ALLOY

2,192,954. PRINTING INKS and other coating compositions prepared by direct transfer of a pigment from an aqueous to an organic vehicle. The process involves the use of cation-active materials to aid the pigment transfer. Invented by Clifford K. Sloan and Gordon D. Patterson, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application July 22, 1936. 17 claims.

2,192,955. PRINTING INKS and other coating compositions containing phosphotungstic acid pigments and lead pigments having improved properties. The invention provides improved working characteristics in such compositions by use of amines. Invented by Clifford K. Sloan and Gordon D. Patterson, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application July 22, 1936. 22 claims.

2,192,956. MANUFACTURE OF PIGMENTS of improved texture by use of cation active substances such as the aliphatic long chain ammonium compounds. Invented by Clifford K. Sloan and Gordon E. Patterson, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application July 22, 1936. 10 claims.

2,193,543. APPARATUS FOR APPLYING COATING COMPOUNDS TO PRINTERS' ROLLERS. Device prevents trapping or congealing of the composition within the applicator, providing a more complete application to the roll surface. Invented by William Wanner, Wilmette, Ill. Assigned to Sam'l Bingham's Son Mfg. Co., 636 S. Sherman, Chicago, Ill. Application May 2, 1938. 8 claims.

2,193,722. APPARATUS AND METHOD OF COLOR REPRODUCTION by the three-color method. Invented by Arthur C. Hardy, Wellesley, Mass. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application September 4, 1936. 17 claims.

2,194,250. APPARATUS FOR THE PREPARATION OF PHTHALOCYANINE PIGMENTS by a method involving reaction of aromatic orthodinitrile vapors with a metallic reactant. Invented by Frank S. Turek, Yonkers, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application October 26, 1938, divided and this application February 20, 1939. 3 claims.

2,193,423. ORGANIC BLACK PIGMENT useful in inks, paints and the like. According to the invention, spirit soluble colors, obtained by the fusion of aniline with nitrogenous benzene compounds, are oxidized to form pigments of unknown chemical composition. Invented by George M. Friese, Plainfield, N. J. Assigned to Amer. Cyanamid Co., 30 Rockefeller Plaza, New York, N. Y. Application September 3, 1938. 8 claims.

Plate Making:

2,191,939. METHOD OF RENDERING A HALFTONE NEGATIVE FREE FROM SCREEN PATTERN in the highlight section. Invention proposes to treat the remaining sections of the subject with ultra-violet light absorbent and then photographically expose the negative to the subject so treated in the presence of ultra-violet light only. Invented by Walter S. Marx, Jr., Los Angeles, Calif. Assigned to Printing Arts Research Labs., Inc., a corporation of Delaware. Application May 23, 1938. 12 claims.

2,191,945. METHOD AND APPARATUS FOR PRODUCING A PRINTING PLATE having a surface of semi-tone character. According to the invention, the semitoned reproduction is made in matrix material by an indenting wheel, the depth of the indentation being controlled by a scanning mechanism arranged to scan the image being reproduced. Invented by Elvin J. Tilton, Brownsville, Pa. Unassigned. Application June 21, 1937. 4 claims.

2,192,129. UREA-FORMALDEHYDE TYPE RESIN useful in molding printing blocks or plates directly from the original as a matrix. Printing blocks according to the invention are claimed to withstand pressures up to 450 pounds per square inch, while type metal will stand only about 300 pounds per square inch. Invented by Carleton Ellis, Montclair, N. J. Assigned to Ellis-Foster Company, a corporation of New Jersey. Application March 13, 1930. 16 claims.

2,192,233. GRAINING MACHINE for preparing zinc, aluminum or other plates for various lithographic processes. The invention is of the type having a pan in which the plates are secured and subjected to the abrading action of sand, etc., and water, and is particularly concerned with the bearings supporting such pans. Invented by Oscar B. Mack, Chicago, Ill. Unassigned. Application May 6, 1939. 3 claims.

2,192,482. METHOD OF PREPARING LITHOGRAPHIC PLATES wherein the conventional steps are followed up to and including the transfer of the image from the negative to the sensitized lined plate and inking of the face of the plate, the method thereafter consisting of the application first of a new plate solution and then of a new fountain-etch solution. Both of the new solutions contain varying proportions of chrome alum, phosphoric and tannic acids, gum arabic, and water. Invented by Philip Schroeder, Cleveland, Ohio. Assigned to one-sixth to Lawrence J. Clark, Lakewood, Ohio, and four-sixths to Irvin J. Rossman, Cleveland, Ohio. Application February 7, 1938. 6 claims.

2,192,754. STEREOTYPE PLATE CASTING DEVICE so designed that the various parts of the casting box lock together automatically when the box is in casting position. Invented by Crawford Park, Youngstown, Ohio. Unassigned. Application February 24, 1938. 2 claims.

2,192,924. METHOD OF MAKING ZINC OR SIMILAR FLEXIBLE PRINTING PLATES having registration openings included in the plate itself. Invented by William W. Maher, San Francisco, Calif. and Carl G. Schoof, Belmont, Calif. Assigned to American Can Co., New York, N. Y., a corporation of New Jersey. Application August 11, 1936. 2 claims.

2,193,457. APPARATUS FOR HANDLING PHOTOGRAPHICALLY EXPOSED FILM SHEET in processes of photo-engraving. With the invention, the removal of an exposed piece of film sheet, and the development, fixing and stripping of the exposed piece of film may be carried out rapidly, adjacent the camera, without the use of a dark room. Invented by John H. Hogan, New York, N. Y. Unassigned. Application September 28, 1938. 14 claims.

2,193,899. METHOD OF FORMING AN OFFSET PRINTING BLANKET for use in applying a woodgrain effect or like design to a surface. Invented by Lloyd V. Casto, Detroit, Mich., and Guido von Webern and Edward W. Hamant, Dayton, Ohio. Assigned to Oxford Varnish Corp., Detroit, Mich., a corporation of Michigan. Application August 27, 1937. 13 claims.

Printing Presses:

2,192,414. PRESSURE ROLLER for rotary printing presses. Device is provided with a double adjustment at each end to provide proper working pressure, compensate for roll surface variation, etc. Invented by Charles E. Reed, Chicago, Ill. Unassigned. Application March 10, 1937. 8 claims.

2,192,819. STOP MOTION FOR HIGH SPEED PRINTING PRESSES wherein a novel mercury switch is employed for actuation upon occurrence of a tear in the web. Invented by Ross L. Smith, Washington, D. C. Unassigned. Application January 12, 1938. 8 claims.

2,193,089. INKING MECHANISM for rotary intaglio presses. The invention provides regulated immersive inking of the rotating design concurrent with the impactive action of a sheet of ink against the design. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill., a corporation of Illinois. Application May 19, 1936. Renewed July 1, 1939. 13 claims.

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2,193,300. PRINTING MACHINE of the type having rocking cylinders, and improved sheet feeding mechanism therefor. The invention provides a drive for the carriage and impression cylinder such as to permit stopping of the impression cylinder when a sheet is fed or taken over by the grippers, without interruption of the drive. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application June 6, 1938. In Germany October 10, 1936. 9 claims.

2,193,565. IMPRESSION MECHANISM FOR PRINTING MACHINES of the type in which the impression platen is movable towards and away from the printing characters in making an impression from a single line of type. Invented by Blackwell K. Murchison, Brooklyn, N. Y. Assigned to Mastalign Corp., New York, N. Y., a corporation of New York. Application April 18, 1939. 20 claims.

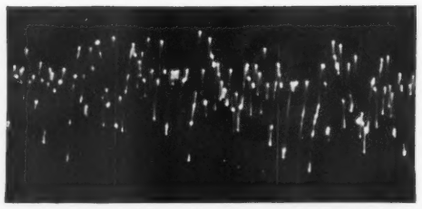
2,194,140. PASTER FOR NEWSPAPER PRESSES characterized by the use of a Celluloid insert in the new, roll to operate the timing switch. Invented by Eugene P. Doyle and Leo F. Long, Toledo, Ohio. Unassigned. Application February 2, 1938. 8 claims.

2,194,424. PRINTING CYLINDER for carrying flexible printing plates. The device is claimed to provide more positive retention and even stretching of the plates. Invented by William F. Grupe, Lyndhurst, N. J. Assigned to Chambon Corp., Garfield, N. J., a corporation of New York. Application January 14, 1937. 8 claims.

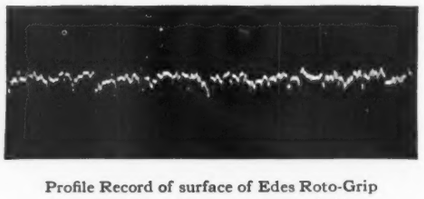
For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D.C.

MEASURED IN *Millionths of an inch*

To prove its claims to the U. S. Patent Office, Edes has Profile Records measuring the flatness of photo-engraving metal surfaces in millionths of an inch. The surface shown in these plates is only a fraction of an inch but clearly shows Roto-Grip is free from the deep scratches that mar the surface of ordinary finish plates. Zinc finished the ordinary way shows, under Profilometer tests, average roughness between 5.5 microinches* and 12.5 microinches. Under the same tests Roto-Grip shows average roughness 4.4 microinches.



Profile Record of roughness of surface and presence of ridges and valleys on zinc ground and polished by the old process. (Not EDES)



Profile Record of surface of Edes Roto-Grip plate. Free from deep scratches and ridges.

*A microinch is a synonym for "millionths of an inch"

ROTO-GRIP

EDES ROTO-GRIP FINISH ZINC

In addition to being flatter, Roto-Grip Finish Zinc is of uniform gauge from edge to center—guaranteed not to exceed variation of one half of 1000th of an inch. No other zinc approaches this accuracy of gauge.

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PLYMOUTH, MASSACHUSETTS, U. S. A.

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Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

PRINTING ROLLER MAN — Wanted by Eastern Publishing House. Preferably someone with Chemical or Mechanical background, who has some knowledge of synthetic rubber rollers. Give complete outline of personal data, education and experience. Reply Box No. 88.

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WANTED — Man for Seybold, Morrison, Wright erection and service work. Must be free to travel and work out of Atlanta. Apply by letter only. Harris Seybold Sales Corporation, 120 Spring Street, N. W., Atlanta, Ga.

WANTED — To represent printing equipment or supplies manufacturer or dealer. Familiar with composing room equipment. Fifteen years experience at the trade, 29 years of age, married. Prefer central territory. Reply Box 89.

Peirce With Ryan

H. K. Peirce has joined E. G. Ryan & Co., Chicago, and will cover Northern Indiana and Western Michigan on A.T.F.—Little Giant and Webendorfer Offset Presses.

Mr. Peirce is a practical printer and has been associated with Bramhall Printing Co., Lewis Printing Co., Lechtman Printing Co., and the Bankers & Merchants Litho Company, Kansas City. For the past four years he has been associated with Brandtjen & Kluge.

Makes Bow June 1

IN ITS March 23 issue, *Business Week* discusses development of the tabloid daily to be published June 1 in New York, and states that the paper is now sure of its birthday, financing for the publishing company having been completed by Publisher Ralph McA. Ingersoll.

Says *Business Week:* "The paper is to be called *P. M.* That's the name dopesters gave it a year ago, and it's going to stick. Publications Research recently bought rights to the title from a printing group that has a trade paper by that name.*

"*P. M.* is to be smaller than existing tabloids—10¼ in. wide by 12½ in. deep, with four columns to the page. It will have 32 pages day in and day out.

"To avoid heavy investment in plant and to retain flexibility for new printing developments, *P. M.* will farm out its printing—just where is still a secret, but it's known that trial runs are being made on a press of the Brooklyn *Eagle*, which has been equipped to handle the new Velo ink. The new ink marks a reversal of existing printing practice. The Velo ink is a solid rather than a liquid, and comes in lumps like coal. It is liquefied by hot water circulating through special jackets built into the press, and hardens on contact with the cold paper. Since the new ink solidifies instantly on top of the paper, without sinking into the fibre, it is claimed to give a far sharper impression on rough paper."

Cercla to General

In connection with an expansion program and the addition of other mechanical metal and plastic binding services, General Binding Corporation becomes the new name of Cercla, Inc. The offices will remain at the present address, 231 South Green Street, Chicago, Illinois. C. E. Emmer, President, and J. M. Peticolas, Vice President, still remain the active executive officers.

Color—Emotional or Visual

Color combinations may be either emotional or visual in quality, depending on their arrangement. When all warm hues are used together, for example, a person gets a definite emotional impression that will differ radically from a combination of cool hues. Hence, the emotional emphasis. But when a cool color is combined with a warm color, the subdued personality of one cancels the aggressive personality of the other and the emotional quality is lost. However, there is sure to be a high visual excitation. These observations come from the Color Research Laboratory of the Eagle Printing Ink Company, Division General Printing Ink Corporation.

Eagle concludes that visual effects, involving contrasted colors, are good for many packages, posters, car cards, window displays, and the like — which all depend essentially on eye appeal. But for more elegant brochures and folders, related colors are frequently best. They give full sway to unique personality regions in the spectrum and seem to thrum the chords of the heart more effectively.

*In the Feb.-Mar. issue of *PM* it is stated: "Beginning with the forthcoming April-May issue, the name of this publication will be changed from *PM* to *AD*. Our rights to the name *PM* have been relinquished to Publications Research, Inc., of New York, which corporation plans to publish a daily and Sunday newspaper."

Letterpress Ink Exposition

The Fuchs & Lang Mfg. Co., Division General Printing Ink Corporation, is issuing to the letterpress industry a combination folder and wall chart.

Features in the book are: Over seventy-two brilliant colors are shown with screen values — twelve of them in gloss inks. The characteristics and working properties of each ink are catalogued. There is a swatch of every color, for printers as well as advertising men.

FOR LETTERHEADS

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Synthetic Roller Bulletin

A synthetic roller bulletin has been published by Ideal Roller & Mfg. Co. In the bulletin are listed and discussed briefly the following kinds of rollers made by Ideal: For Direct Printing, Lithography and Photo-Lithography, Engraving, Newspaper, Coating, Rotogravure Impression, Aniline Printing, Wallpaper, Plywood and Waxing Rollers.

Rotogravure Impression Rollers are discussed as follows: "Pressure-resisting, soft, lively synthetic compound firmly knit to steel. Designed to prevent crazing and cracking . . ."

EQUIPMENT

(*Continued from Page 30*)

the plates. It was likewise apparent that plasticity was a vital quality. Many people are inclined to treat these two features as one and the same characteristic, but basically they are quite different. Softness refers to that property of a dry mat which permits taking a deep mold with minimum pressure, while plasticity has to do with maintaining and holding that depth or impression once the molding pressure has been released. Either one of these features without the other spells failure of the mat to give a satisfactory reproduction.

"The combination of softness and plasticity (which is the manufacturer's term for depth retention) permits the complete reproduction of all tonal gradations in minute detail.

"The face of the dry mat intended for this type of work must be smooth and even. All indentations must be eliminated so that they may not be transferred to the reproduction appearing in the newspaper. A glass-like surface enables advertiser, agency and job shop to obtain an all-over black solid."

Minimum shrinkage, light weight in relation to various thicknesses supplied, and uniformity of thickness manufacturer states, are other qualities incorporated in the Wood Ad Mat.

New Style Ink Container

This issue of *Printing Equipment Engineer* carries an advertisement by the Howard Flint Ink Company illustrating and describing a new style ink can. The package is lithographed in three colors.

"The main advantage of the new package," states the Flint Company, "is that it can be opened easily without skinning knuckles. Waste is also eliminated by this new can. These cans may be opened, a portion of the ink taken out and the balance kept in good condition, because the lid can be replaced with a good tight seal."

The cans range from ½ lb. to 10 lbs.

oward Flint Ink Company
Printing and Lithographic Inks
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Method of opening new style ink container announced by Howard Flint Ink Company.

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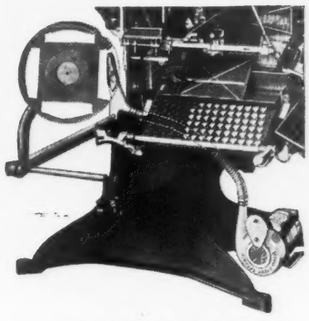
IT has become a well established fact that the best method of cooling molds is by air,—DRY AIR.

BY the "STAR" method, now in use for almost four years, cooling is obtained where needed most, — ***on the back of the mold . . .***



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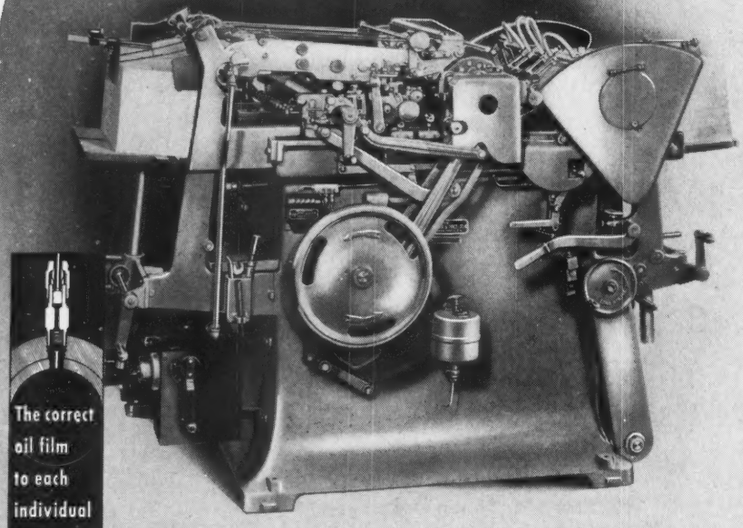
upkeep down... PROFITS UP



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● ALWAYS READY . . . a press with Bijur "metered" lubrication requires no time out for oiling . . . maintenance cut to a fraction . . . : weeks of extra running-time gained. Bijur-lubricated bearings are protected during entire press life! Upkeep down—bigger output—better quality of printing—safer profit margin. It all pays!

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Correction

In the February issue, an illustration showing the Fluorescent Lamp family appeared in connection with an article on lighting developments by R. L. Oetting, General Electric Co., Nela Park Engineering Dept., Cleveland. The 20 w. lamp group was labeled "T-12" instead of "T-24." Mr. Oetting states General Electric Fluorescent Lamps are designed on a 10 w. per ft. basis; therefore, the 20 w. lamp is 24 in. length.

Methocel

The Dow Chemical Company has announced the first American production of water-soluble methyl cellulose. The properties of this product, which is to be known as Methocel*, forecast possibilities as an agent for dispersing, thickening, emulsifying, sizing and coating.

Methocel is colorless, odorless, tasteless and non-toxic cellulose derivative. It is readily soluble in cold water and is generally used in the form of its aqueous solution. Methocel is dissolved most easily by first wetting the material thoroughly with hot water (80-100 deg. C.). The mixture is then cooled to room temperature or below, preferably 5-10 deg. C. and stirred until smooth. Methocel solutions may also be made by stirring in water at room temperature. The initial hot water treatment however, hastens solution.

In the paper and printing industry, Methocel applied to paper as a continuous surface coating is said to produce a permanent barrier to penetration by oily or greasy materials. Coatings of this material also prevent undue penetration by lacquers, varnishes or waxes during their application to paper. Surface application of Methocel to paper acts to bind fibres and eliminate "linting" or "picking" during printing and increases the toughness and flexibility of paper.

With a light sizing treatment on paper or cardboard, ink penetration is materially reduced. This greatly increases the glossy appearance of the ink and gives a varnish-like effect to the printed surface.

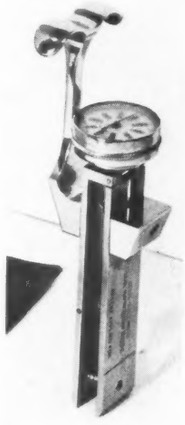
*Trade name registered U. S. Patent Office, The Dow Chemical Company.

Impression Setting Gauge

While the Cecil-Callahan Dial Impression Gauge is not exactly a new product, announcement is now made by Dust-Less Equipment Company, that after having been off the market for some time because of excessive manufacturing costs, the gauge is again available.

The Cecil-Callahan Impression Gauge is used for gauging and obtaining the iron-to-iron distance between the impression and blanket cylinders on rotary newspaper presses. It will indicate accurately from a direct reading dial the exact measurement in thousandths of an inch. The gauge dial ranges from 0.625 in. to 0.525 in.

In use, the gauge is inserted between the cylinders, leaving the hands free. While impression is being adjusted a visible reading on the dial records changes in cylinder adjustment by 0.001 in.



Cecil-Callahan Direct Reading Dial Impression Gauge for Newspaper Rotary Presses — Gauge is inserted between impression and blanket cylinders. While adjustment changes occur gauge shows the changes by 0.001 in. graduations.

Daylight Miralume Fixture

There are a number of lighting problems existing in most printing plants which are found in no other industry and consequently must be considered and treated specifically from the standpoint of providing satisfactory artificial

LUBRICATED FOR LIFE
LARGE OR SMALL
There is a PULSOLATOR system for automatically lubricating every type and size of printing press.
Customers write that Pulsolator
"Increases press productive time 3-3%"
and
"Reduces oil consumption 60%"
At your request our engineer will call and demonstrate how Pulsolator obtains these savings.
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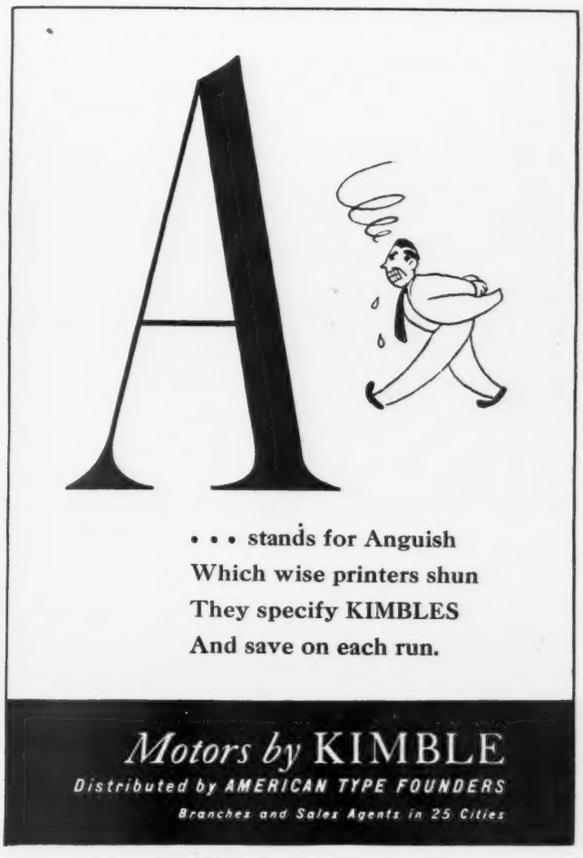
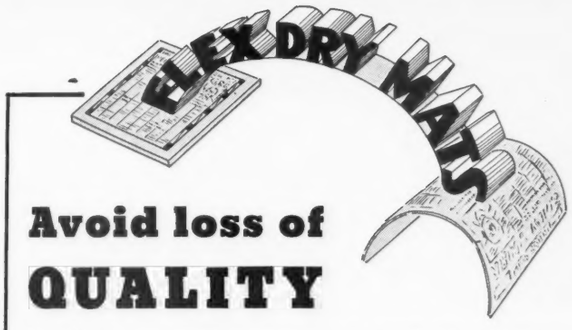
Brighton, Boston, Mass.
Automatic oil lubrication
BLANCHARD PULSOLATOR


A
• • • stands for Anguish
Which wise printers shun
They specify KIMBLES
And save on each run.
Motors by KIMBLE
Distributed by AMERICAN TYPE FOUNDERS
Branches and Sales Agents in 25 Cities



Avoid loss of QUALITY

in the gap between type and stereotype

Quality type . . . quality stereotype! It's easy to bridge that gap with FLEX ALL-AMERICAN dry mats --- to carry *all* the quality of halftones and copy *all the way through*.

Maybe you think that dry mats are pretty much all alike. If you do, send for samples of FLEX dry mats. You'll be surprised at the difference that this different dry mat can make. Please specify gauge, shrink, and type of casting equipment used.

FLEXIDEAL DRY MAT CORPORATION
21 WEST STREET • NEW YORK

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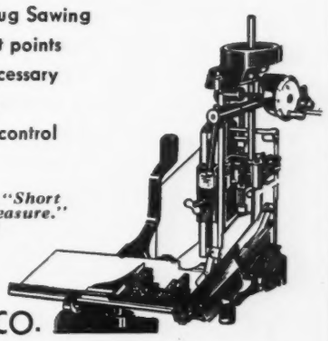
MAKES TOUGH JOBS EASY

MOHR SAW

Tricky odd-measure jobs are no more trouble than regular run stuff when MOHR SAW is on the job. Just a turn of the dial and the slug is automatically sawed to measure as it is ejected. Adaptable to either Linotype or Intertype.

- 100% Automatic Slug Sawing
- Sets to points or split points
- No liner changes necessary
- Simple—trouble free
- Single dial measure control
- Absolutely safe



Write for booklet, "Short Cuts with Short Measure." It's FREE!

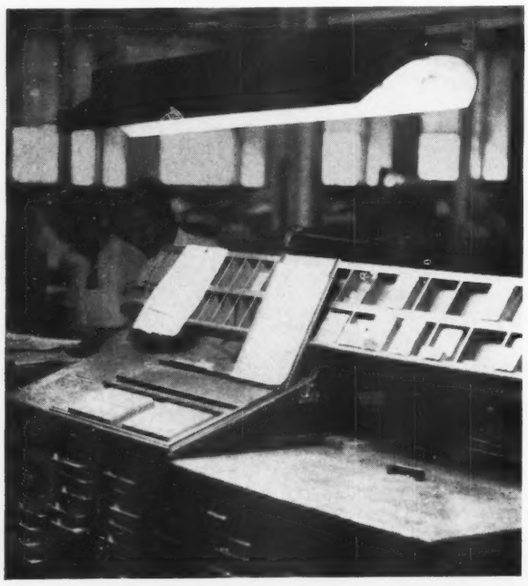
MOHR LINO-SAW CO.
128 N. UNION AVE. CHICAGO, ILL.

illumination, states Hygrade Sylvania Corporation.

The composing table (stone) application is one which requires not only high-levels of illumination of first-class distribution characteristics, but a color quality of light of such nature as to reduce reflected glare from type faces. This glare is apparently insignificant, but the multitude of pin-point sources of brightness are most distracting, and the cause of many errors with resulting misprints. The most successful method of overcoming this difficulty is through the use of a large area light source of low brilliancy. Such a source by virtue of its area will eliminate bothersome shadows, and its low surface brightness will in turn reduce the sharpness of the glare points.

Although there is no impartial scientific data to substantiate the claim that blue, blue-green, or blue-white light actually reduces glare from metal surfaces, it is an established fact that many metal workers and typesetters prefer to work under such color quality. Without actually reducing the brightness of the glare points, this color seems to soften them considerably and thereby create a favorable reaction among many composing room workers.

In the pressroom, there are several other conditions incidental to the lighting of both flatbed and rotary presses which can best be treated with large sources of low brightness.



View of Hygrade Miralume, 48 in., 40 w. tubes with white porcelain eneamel reflecting surface.

Decie Welded Rubber Plates

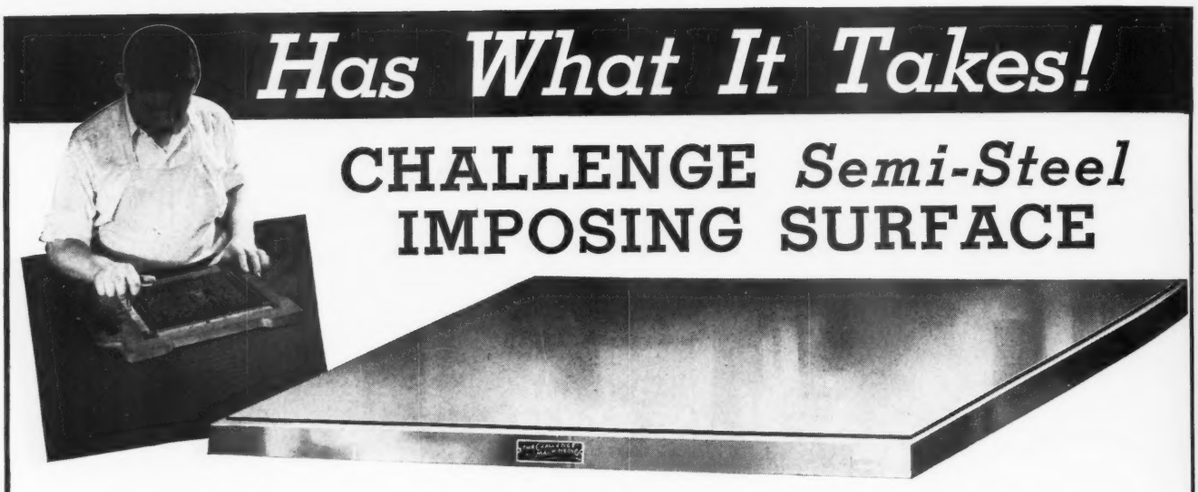
Some of the features of a welded metal-base rubber printing plate announced by Decie Precision Plate are as follows: The plate (0.090 in. thick) is welded to its own rigid metal base, which may be standard photo-engraver's zinc, at the same time the vulcanizing is done. It is stated that a plate made by this process is welded to the metal base without the use of adhesives in one operation and the rubber plate itself cannot become loose, no matter what kind of plate wash may be used.

The time stated to be required for making a plate is as follows: Molding, from 8 to 10 min., and vulcanizing and welding without interruption in the vulcanizer takes 10 min. or less, according to rubber used.

It is claimed that stripping the metal-mounted rubber plate from the mat does not cause bending of the metal plate because a release medium makes

Has What It Takes!

CHALLENGE *Semi-Steel* IMPOSING SURFACE



SMOOTH ★ STRONG ★ ACCURATE

● Here's the ideal working surface for busy shops. It promotes speed and precision . . . stands up under severe use. It's superior to marble—won't crack or chip. Since no coffin is required, there's more work space and no gutter to catch type or spacing material.

Challenge Imposing Surfaces are made of high grade iron and steel two inches thick. The under side is strongly reinforced by cross-ribbing, so that the surface will not sag under the heaviest forms. Furnished with or without rabbeted edge. Write for details.

The CHALLENGE MACHINERY Co.

GRAND HAVEN, MICHIGAN

CHICAGO, 17-19 E Hubbard St. 372 200 Hudson St., NEW YORK

Challenge

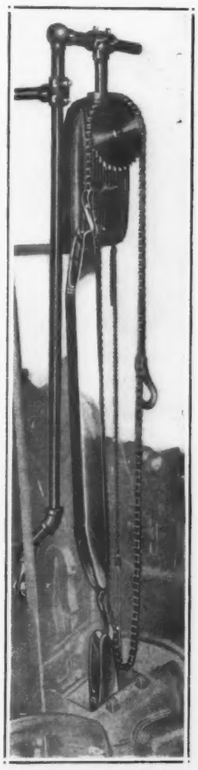
OLD or NEW, a Plant Needs This Advantage

"IT'S important to stick to Certifieds while we are using this old equipment," argued the stereo foreman. "It needs everything a dry mat can give it." "And when the new equipment comes?" "We'll still stick to Certifieds and give the new stuff a chance to show what it can do."

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M New York, N. Y.

Certified DRY MATS



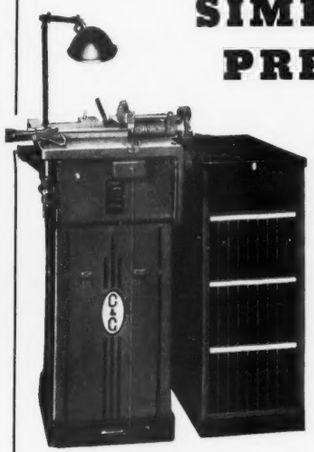
4 Exclusive Features of The **Jordan** CONTINUOUS **METAL FEEDER**

1. Operating on a continuous chain, there is no need to pull back the chain and (hot) hook when a new pig of metal is to be attached.
2. The pigs are so spaced on the chain that they can not jam in the metal-pot.
3. The Jordan is a self-actuating feeder. Its movement is controlled only by the amount of metal in the pot so that there can be no sudden dropping of the pig to the bottom of the pot.
4. The Silent Alarm tells you when a new pig is to be attached.

Tell us the type of machine on which you want to install continuous feeding and we will ship you a Jordan Feeder with the proper support, ready to be attached in a few minutes by your machinist or operator. The price, including support $75

UNITED AMERICAN METALS CORP'N
200 Diamond St., Brooklyn, N.Y. 2246 W. Hubbard St., Chicago, Ill.

as fine a type metal as is made
UNITED AMERICAN



SIMPLICITY PRECISION SPEED

featured in the

C&G No. 3-A SAW TRIMMER

Here is a soundly constructed, streamlined saw trimmer with many time-saving features that place it far in advance in saw trimmer operating efficiency. Constructed of the finest materials and designed to eliminate waste motion, you will find the No. 3-A C&G, with its many time-saving conveniences, an economical asset in your plant.

PERFORMANCE GUARANTEED

Milwaukee Saw Trimmer Corp.
612 E. Clybourn St., Milwaukee, Wis.

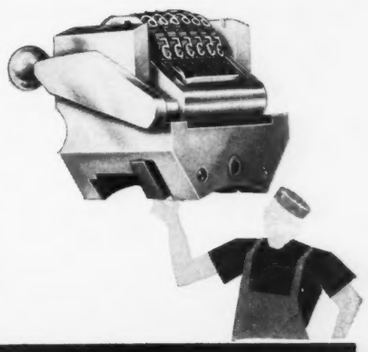
ROTARY PRESSES

Equipped with

WETTER

Number Better

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.



WETTER NUMBERING MACHINE CO.
246 LOGAN STREET, BROOKLYN, NEW YORK

"FLECTO"

GUMMED BACKING FELT

Recommended by Stereotypers everywhere

Coated with glue that will not slip or leave the matrix under heat. Tears easily. Made in gauges .025, .030 and .035 — Sheets 18 in. by 24 in., and gauges .040, .045 and .050 — Sheets 18 in. by 22 in. Cut into strips without charge.

Free samples on request

"PLATE-TAK"

CUT MOUNTING TAPE

No tacks. No cement to squeeze out. Simply lay a strip of this super-thin tape under the cut; press down by hand, and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base.

Free samples on request

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9603 NORTHERN BLVD. CORONA, N. Y.

release easy, and the process is such that the plate cannot shrink.

"Dead rubber" (corresponding to dead metal in the metallic plate) may be cut away easily to expose the metal base without leaving fuzz of welding cloth or sticky back.

Patents have been applied for, it has been announced.

Seprable Reflector

The Seprable Reflector, a development of the Goodrich Electric Company, is now furnished with a hood of rolled steel for lightness and strength. The thinner wall provides additional wiring space, while deep threads form a better ground connection.

Seprable Reflector

A quarter-turn releases or attaches the reflector. To install, it is necessary only to attach the hood and the socket wire. The reflector can be snapped in place later. The fixture is fitted with a resilient socket which is also removable and which is replaceable. This socket is spring-mounted to absorb vibration and lengthen lamp life. The Seprable Reflector is finished in permanent enamel.

Goss Vacuum Casting Box

The Goss Double Cooled Curved Vacuum Casting Box is made in two models—one for casting thin solid plates; the other, for ribbed plates. The thin plate casting box is equipped with water cooling chambers and electric heating units in both members for absolute temperature control. Through the use of this cooling and heating system, any desired temperature relationship between the two members can be quickly obtained and accurately maintained,

Linotype—Intertype

replacement parts

New Molds, universal and adv. fig. style	$ 55.00	Back Knives	$ 2.00
Back Jaws	10.00	Side Knives, set	13.00
Gross Assorted Screws	1.50	Plungers	4.00
Spacebands	.75	Dis. Box Bars	4.50
Liners, solid style	1.00	Sec. El. Bars	6.40
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		Watch Oil for Keyboard Cams	.50
		First El. Spring Pawls	.07
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REBUILT MATERIAL

Rebuilt Molds (uni. and adv. fig.) ($10 allowance for old)	$ 35.00	Rebuilt Margach Type Feeders	$ 55.00
Rebuilt Mold Disks ($5.00 allowance for old)	35.00	Rebuilt Back Jaws	5.50
Rebuilt Electric Pots	150.00	Rebuilt Sec. El. Bars	4.00
Rebuilt Monomelts	150.00	Rebuilt Dis. Box Bars	2.50
Rebuilt Gas Pots	85.00	Reground Back Knives	1.25
		Reground Side Knives, set	10.00

REPAIRS

Rebuilding Magazines	$25-40	Regrinding Side Knives, set	$ 2.50
Rebuilding uni. and adv. fig. molds	25.00	Rebuilding Back Jaws	4.50
Regrinding Back Knives	.75	Rebuilding Sec. El. Bars	3.50
		Rebuilding Dis. Bx. Bars	1.75

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Over 300 always in stock. Write for list and proofs. We buy, sell and trade in all kinds of Linotype and Intertype parts.

Free Printer's Apron

With cash order of $10.00 or more mentioning this advertisement and offer.

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TOWANDA, PENNA.

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NO STRING TIE-UP SYSTEM SAVES 90% OF TIE-UP COST!

- Assures speed in makeup, corrections and proofing.
- Locks pages in galleys securely without tying them up.
- Simple and efficient.
- Made for any size galley.
- Low cost.
- Satisfied users everywhere.

Write today for full information— no obligation

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Made both from regular rubber and synthetic compounds to meet the requirements of plates for the high-speed printing of cardboard, cloth, wood and rough-textured papers. Special formulas for aniline and linseed base inks.

Ideal gums have high tensile strength, mold easily and are abrasive-resistant. Save on ink and make-ready time. For more brilliant colors and for flat tints that are smooth and even, use plates made from Ideal plate gums.

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Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.

Write
KLEAN-O-MAT CORP.
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SAFETY · RELIABILITY · ECONOMY

CLINE
PRESS DRIVES and CONTROL
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Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

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DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

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Interested in Purchasing . . .
Surplus Printing Machinery and Equipment or Closed Printing Plants in their entirety . . . write to

ROGER LANDOLF
411 S. Market St. CHICAGO Phone Webster 4500

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
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ATTENTION STEREOTYPERS

Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.

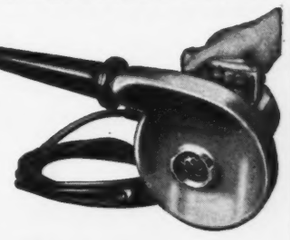
RUSSELL PRODUCTS COMPANY
702 Harrison Building, 15th and Market Sts. Philadelphia, Pa.

A CLEAN Plant is a PROFITABLE Plant

Keep your Plant clean with BREUER'S BALL BEARING

TORNADO
CONVERTIBLE ELECTRIC
BLOWER Cleans EVERYTHING

Blows dust and dirt out of motors and machinery. Quickly convertible into suction cleaner for type cases, storage bins, floors, walls, etc. Sprays paint and insecticide. Hundreds of uses.



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TAKE THE DUST OUT OF INDUSTRY with BREUER'S BALL BEARING **TORNADO** PORTABLE ELECTRIC BLOWER

Write for information and FREE TRIAL OFFER

Circular on New Cabinet Model
FREE *Rouse* BAND SAW
See the No. 2 Rouse Band Saw for smaller plants.
H. B. ROUSE & CO.
2216 N. Wayne Ave., Chicago, Ill.

Wanted

5-0 MIEHLE TWO-COLOR PRESS; CHAIN STITCHER; CHOPPER. Springfield Republican, Springfield, Mass.

resulting in greater uniformity and finer texture of the plate.

The vertical core or stationary member is equipped with a cap and reel rod arrangement for holding the backing paper against the core. The backing paper can be quickly attached, and it is not necessary to trim it to any special shape or exact size. The same piece of backing paper can be used for many casts.

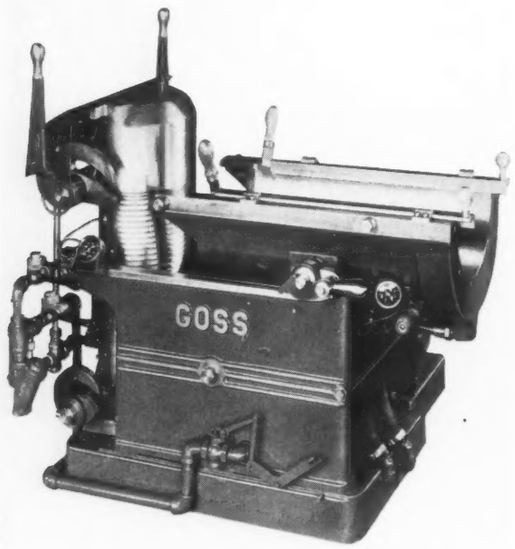
Heating units are placed in such a way that they keep the areas warm where the chilling tendency is the greatest. Dial type thermometers are placed where they are fully visible to the operator at all times, giving him a visual check on the casting conditions. The motor-driven vacuum pump is mounted on its own sub-base as a separate unit and can be removed and placed on a wall or pillar in the vicinity of the casting equipment.

The ribbed plate casting box is equipped with a ribbed plunger and has special thermostatically-controlled water circulating system. Like the thin plate casting box, this machine is equipped with thermometers that accurately register the temperature of each member. Separate hand controls are provided for cooling either casting member independently of the water circulating system.

By using a pre-heating chamber, the cold tap water is tempered before it is carried to the chamber where the actual cooling of the plate is accomplished, eliminating the possibility of chilling.

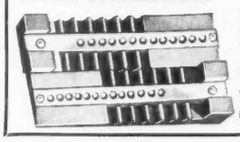
The vacuum chambers of both casting boxes are built so that by removing a top and bottom plate, the full vacuum system is completely exposed for easy cleaning should accidental spills occur. The application of vacuum to the mat is controlled by a foot lever, and registering marks are put in the box to permit accurate centering of the mat within. For use with this registering device, Goss makes a mat trimming and registering machine which registers color mats to the key mat and puts suitable scribe marks on the mat to match up with those on the casting box.

The casting members of the Goss Curved Vacuum Casting Box are made of a special nickel alloy which is resistant to warping and corrosion.



View of Goss double cooled Curved Stereotype Newspaper Plate Casting Box. One model for casting thin, solid plates and the other for ribbed plates.

W. S. WARNOCK POSITIVE LOCK QUOIN



Thousands in use. 2 sizes — #1 & #2. Send for Catalog.

W. S. Warnock Co.
1524 Jonquil Terrace
CHICAGO, ILLINOIS

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Pressroom

1 INKS — Use the post-card to get color chart and selector of Flint inks. Offered by the Howard Flint Ink Company.

2 BEARINGS — "SKF Bearings assure self-alignment, rigidity, low friction and high speeds for your presses." Let SKF send you details on bearings designed or printing presses and equipment. Mail the coupon.

3 AMERICAN TYPE FOUNDERS offers to send a press sheet and details on the Kelly Clipper. Use this service to check the advantages and features of this press. Fill out the coupon at the bottom of this page.

4 OFFSET PRESS — "To produce the best in Offset, you must have modern equipment." Harris-Seybold-Potter Co. offers interesting reading matter on its press — also information on Harris Litho chemicals.

5 INKS — Let IPI send you interesting reading matter on its Vaporin, Holdfast, Lithox and other new inks for packagers. This information is gratis. Post-card brings it.

6 TWO - COLOR ROTARY PRESS — C. B. Cottrell & Sons Company will send you a booklet printed without makeready describing this press. Send for it. Use the coupon.

7 LUBRICATION — "There is a Blanchard Pulsolator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

8 NUMBERING MACHINES — for flat bed and rotary presses are manufactured by the Wetter Numbering Machine Company. Full information and description offered.

9 PRINTING PRESS BLANKETS — Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Prices and samples will be sent to you. No obligation.

10 PAPER —"To get the most out of your printing, investigate Champion Paper, the foundation for good printing." Champion Paper & Fibre Co. offers information on its complete line of papers.

11 INKS — Morrill presents to the industry a series of specialized color books. No obligation, just circle this number on coupon and write in the type of ink in which you are interested. Interesting material will be promptly forwarded.

12 PAPER — International Paper Company this month offers details and description of "Adirondack Bond." Check up on the features of this letterhead and form paper.

13 BEARINGS — The Timken Roller Bearing Company will send you booklet containing information on its bearings. "Speed press production, cut operating costs."

14 PRESS — Miller announces "new trade-in plan whereby you receive a credit certificate good for five years and in an amount four times that of your machines scrap value." Full particulars offered. Just circle this number on the coupon. We do the rest.

15 INK — "Zephyr Blacks, for flatbed presses, are favorites across the nation. Drying speed is amazing." Sinclair & Valentine offers descriptive folder. Send for it.

16 COLD SET INK—J. M. Huber, Inc., offers to send you specimens of Velo Cold Set rotary press printing. Check up on this revolutionary new ink. No obligation.

17 GENERAL ELECTRIC offers information on its new automatic color register control. "Automatic photoelectric system detects misregister of any color and applies correction." For gravure presses. Use the coupon to get free details.

18 ROLLERS — "Vulcan Rollers are trouble-free, weather-proof, non-swelling." Let the Vulcan Proofing Company send you printed circulars on its "Vulcolastic" Rollers. Gratis.

19 AUTOPASTER — Let Wood Newspaper Machinery Corp. send you details and specifications of the Wood Autopaster. No obligation. Use the coupon.

20 CASTING BOX—"Goss 44-G Curved Vacuum Casting Box gives absolute control of casting conditions, uniform plates." Goss offers details.

Composing Room

21 METAL FEEDER — "The Jordan continuous feeder has many exclusive features." United American Metals Corp. will be glad to send you interesting data. Learn more about this feeder.

22 CHALLENGE MACHINERY will send you details on its Semi-steel Imposing Surface. "Superior to marble—won't crack or chip. Will not sag under heaviest forms." Use the Postage-paid return card.

23 SAW — "1100 plants have discovered that the Glider obsoletes all others — cuts sawing time one-third." Hammond Machinery offers full description and prices in interesting booklet. Send for it. Just circle this number on the post-card.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2285 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio

ARE YOU INTERESTED IN FLUORESCENT LIGHTING?

Would you be interested in learning more about this new lighting development for printing plants? If so, kindly fill out this card and mail — No obligation.

Would you like to read editorial articles in PRINTING EQUIPMENT Engineer on the subject of Fluorescent Lighting? ☐

Without obligation would you like to receive manufacturers literature on fluorescent Lighting? ☐

Firm Name.....

Name and Title.....

Street..... City.....

State.....

Use this Free Service — Keep up-to-date on Equipment and Supplies

24 CUT CEMENT—"Booth's Zink Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

25 DETAILS AND SPECIMENS of Ludlow typefaces will gladly be sent you by The Ludlow Typograph Company. Learn more about Ludlow equipment.

26 DETAILS on New Universal Intertype are offered by the Intertype Corporation. Check up on this new typesetting machine. No obligation, just fill out the card.

27 SPECIMENS of the new Monotype "Stylescript" are offered by Lanston Monotype Machine Co. Post-card brings booklet on this typeface.

28 MERGENTHALER LINOTYPE will be glad to forward you a copy of its booklet "Food Store Ads from the Linotype Keyboard." Coupon brings it to you.

29 INFORMATION — on C&G Saw Trimmers will gladly be mailed to you by Milwaukee Saw Trimmer Corp.

30 MATRIX CONTRAST — "4% of the total outlay for operating line composing machines is saved by Black & White Matrix Contrast Service." Let Matrix Contrast Corporation show you proof of savings and information on pay-as-you-profit system.

31 FREE BOOKLET shows how Mohr Saw handles all kinds of odd measure jobs — gives you complete story. Offered by Mohr Linosaw Company.

32 INFORMATION — On Imperial Type Metal Company's "Plus Plan" will be sent to you. Use the coupon.

33 REPLACEMENT PARTS for Linotypes and Intertypes. Use the postage-paid return card to get free catalog of parts, material and repairs. Offered by Montgomery and Bacon.

34 COMPOSING ROOM SAW — New Hammond Mercury "has what it takes." Hammond also features popular priced Bench Mercury. Coupon brings you free complete literature. Learn more about these saws.

35 GALLEY LOCK — Let the Riehl Galley Lock Co. forward you details on the "Riehl–Ock system — "Saves 90% of Tie-up time — banishes string Tie-ups."

Stereotype Dept.

36 MAT CASTER — "Easy Kaster '8' ", states Hammond, "casts perfectly in every respect with the minimum of effort. Single column to full page mats. Equipped with or without 800 lb. valve-controlled melting pot." Hammond will gladly send you prices, terms and descriptive matter.

37 DRY MAT — Burgess states, "The ability of the stereotyper shows to best advantage when he uses Burgess Chrome Mats." Circle this number on the coupon to get samples and booklet describing Burgess Mats.

38 CURVED PLATE ROUTER — "No flying chips, fully enclosed —more plates per man per day. Anti-friction bearings throughout." Sta-Hi Corporation will be glad to mail you full data on its new "Routomatic."

39 DRY MATS — Wood Flong offers sample lot of its dry mats. "Wood Mats give white highlights—solid blacks—true halftones and middletones — deep molds — clean plates."

40 FREE SAMPLES of "Flecto" Gummed backing felt and "Plate-Tak" Cut Mounting Tape are offered by Eastern Newspaper Supply. Circle this number on the coupon. We do the rest.

41 DRY MAT — "For consistent readability, Certified clarity is a big help." Mail the card for further data. Gratis.

42 CATALOG of supplies for the printer will be mailed to you by American Publishers Supply. Contains many useful products used daily in stereotype departments. Coupon brings it to you.

43 DRY MAT — Flexideal Dry Mat Corporation offers free samples of Flex Dry Mats. Mention gauge, shrink, type of equipment you use. Fill out the coupon and mail. We do the rest.

Miscellaneous

44 ZINC — "Dependable plates mean better engravings and more work for letterpress." Atlantic Zinc Works will send you booklet entitled "Getting Down To Zinc Facts."

45 PRINTING EQUIPMENT MOTORS — Kimble Electric describes the modern design of its motors, built especially for the printer, in a booklet which will be mailed to you without obligation. Coupon brings it.

46 ZINC — Edes states, "Roto-Grip produces a gauge that does not vary more than ½ of 1/000 inch. No grinding grooves—no long waves or bumps." Use the post-card to get free data.

47 WANT TO SELL surplus machinery and equipment or complete plants? Post-card brings details. No obligation.

48 LUBRICATION — Bijur offers latest information and circular on automatic lubrication for printing presses and machinery. Send for it.

49 MOLD COOLER — Linotype Parts Company gladly will mail you literature on its "Star" mold cooler. Send for it.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
FIRST CLASS PERMIT NO. 2285 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*
1276 West 3rd Street
Cleveland, Ohio

PRINTING EQUIPMENT Engineer — April
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

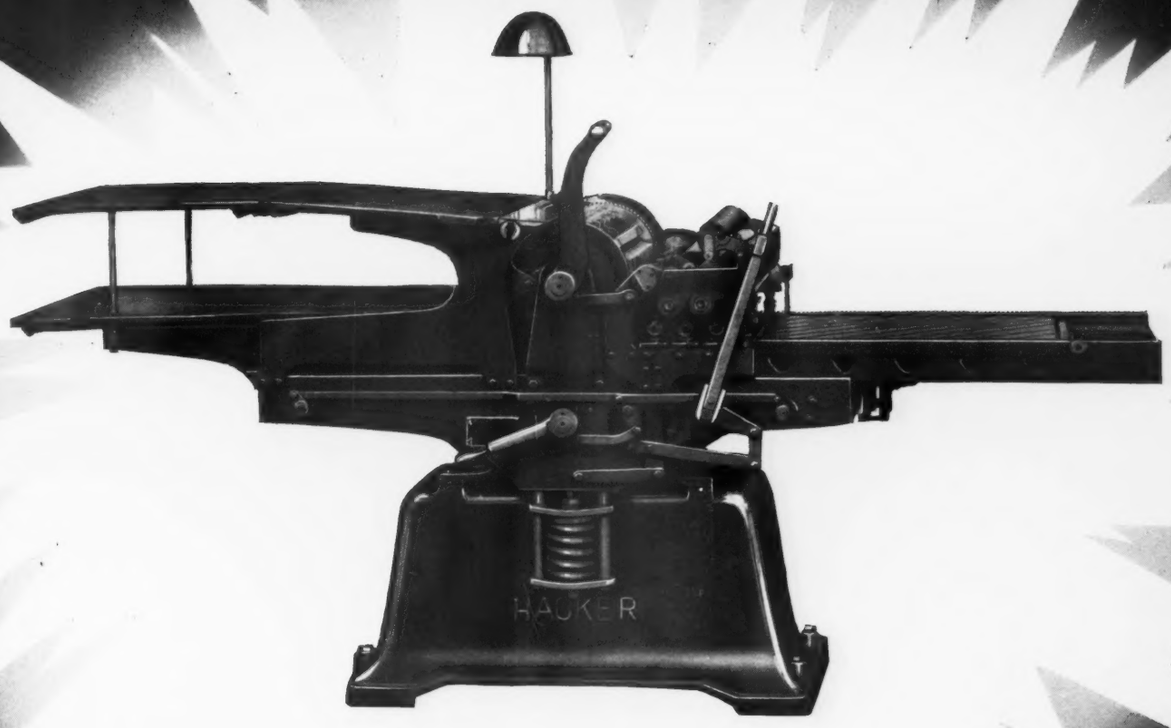
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49

PRINT YOUR NAME AND ADDRESS

Name.....Title.....Dept.....

Firm Name.....

Street.....City.....State.....



Save Money
ON No. 4 HACKER TEST PRESSES

No. 4 Hacker Test Presses are used throughout the world by Printers and Photo-Engravers for testing the printing quality of halftones and forms. They take a form or plate 18" x 25".

They may be used for testing job and small automatic press forms locked in chases. The No. 4 Hacker Test Press has the precision necessary for premakeready of cuts and for making sectional overlays for transfer to production presses.

A number of the No. 4 Hacker Test Presses have been traded in on proof presses of larger capacity. These presses were returned to the Vandercook factory where they have been completely rebuilt and are as good as new.

Rebuilding operations include remachining bed and cylinder and replacing all worn parts. The rebuilt No. 4 Hacker Test Presses are guaranteed to operate and look exactly like new proving machines.

This is a real opportunity to get a genuine Hacker Test Press at a greatly reduced cost. It will save its price many times over in the plant not now equipped for pretesting and premakeready.

Circular giving complete information with prices will be mailed at your request and without obligation. Write now.

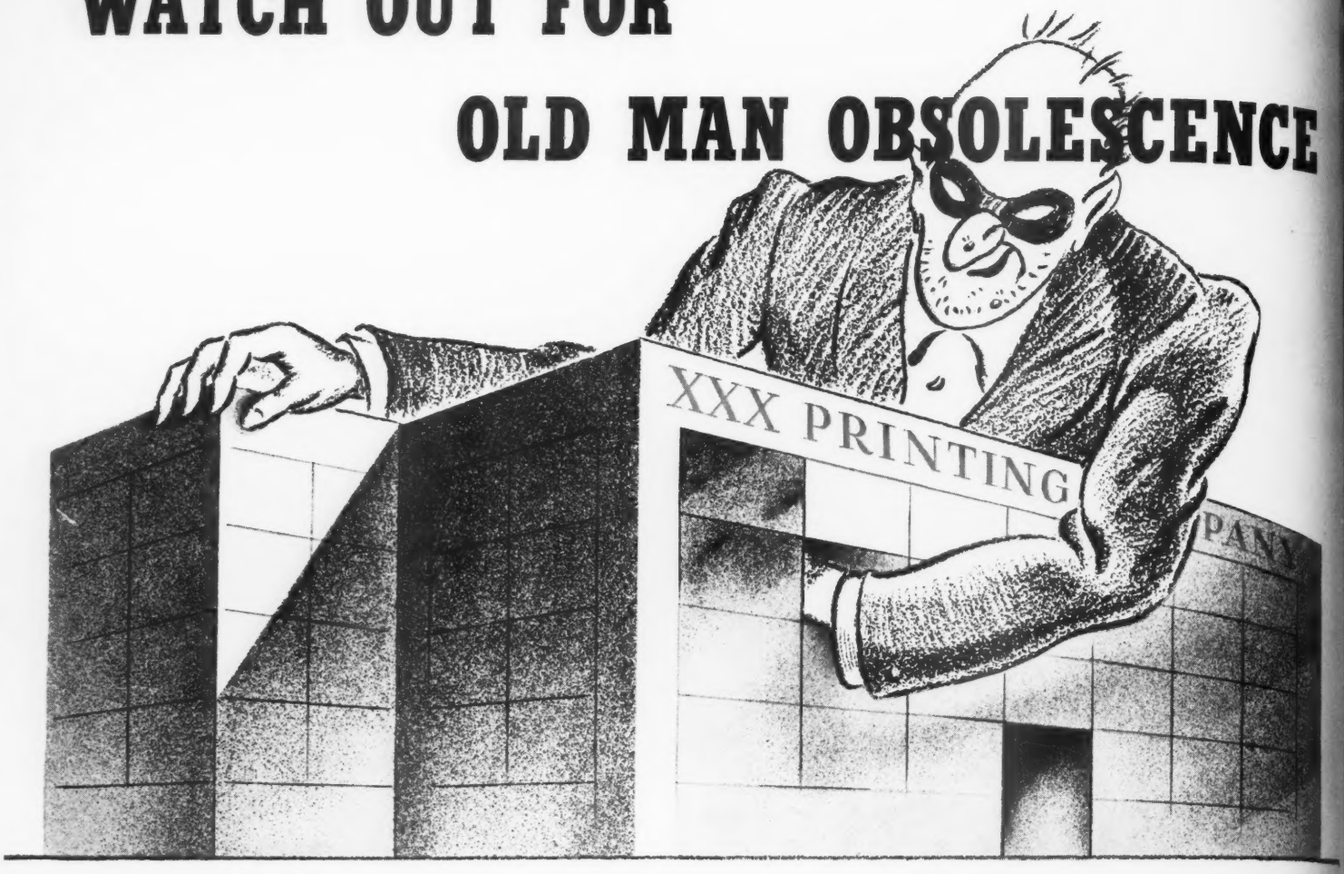
VANDERCOOK & SONS

Main Office and Factory
908 North Kilpatrick Avenue, Chicago

Eastern Branch
220 East 45th Street, New York

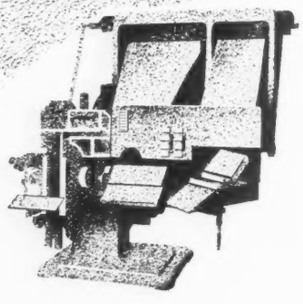
Canada: SEARS LIMITED, Toronto, Montreal, Winnipeg, Vancouver

WATCH OUT FOR OLD MAN OBSOLESCENCE



TO BOOST THE VALUE of YOUR INVESTMENT

- ✓ Complete Flexibility
- ✓ New Quick-Change Features
- ✓ Interchangeability
- ✓ Mixer and Non-Mixer Convertibility
- ✓ Automatic Magazine Shift
- ✓ Streamlined Design
- ✓ Sixty-one Equipment Combinations
- ✓ Intertype Simplicity and SPEED



He's Your Private Enemy No. 1

✓ Old Man Obsolescence is sneaky. He robs you of profits in plant operation without arousing your suspicions... *Watch out for him!* If the old fellow has already done his dirty work in your composing room, there are two things you can do about it: (1) Discard your obsolete equipment—put Old Man Obsolescence out; (2) Buy Universal Intertypes which will help to *keep* him out!

✓ Universal Intertypes are designed to *protect your investment.* If the future brings changes in your requirements, Universal features will help you to meet the changed conditions. Some of these features are... text and display flexibility... finger-flip changes of type... distribution into two magazines simultaneously—*even on non-mixers.* It is even possible to select for your present needs a non-mixer machine which can later be converted into a mixer—or vice versa—in your own composing room, at moderate cost.

✓ Be Ready for changing requirements. At the same time get new features which have never before been available on line composing machines. *Investigate the Universal Intertype.* Address all inquiries to Intertype Corporation, 360 Furman Street, Brooklyn, New York.

Step Ahead... Stay Ahead... with the UNIVERSAL INTERTYPE

CAIRO FAMILY AND BOOKFACE